

THE AUTOMOBILE

WEEKLY

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AUTOMOBILES IN MILITARY SERVICE.

THE military authorities of the principal countries of the world are showing an ever-increasing interest in the automobile, and are realizing that the motor vehicle is one of the most important factors in modern transportation, and not simply a vehicle suited to pleasure travelling only. It is believed by many military officers that the automobile will be-

sufficient power for leisurely, easy movement; baggage and supply trains made up of automobiles, and the list might be continued almost indefinitely. Quite extensive experiments have, in fact, already been made in these directions, mainly in England and on the Continent, though the United States Army authorities are giving the matter some attention. Most of the ex-

motor, was used in the autumn manoeuvres of the British Army on the Essex coast for transporting officers rapidly from place to place. The car used is illustrated herewith, the photograph having been taken at Wheeling, Essex, while on duty in a sham engagement. Lieutenant P. W. Northey is at the wheel, and seated beside him is the Danish attaché, Captain Alex. de Kauff-



MILITARY OFFICERS IN CADILLAC LIGHT TONNEAU CAR PHOTOGRAPHED WHILE ON DUTY AT A SHAM BATTLE AT WHEELING, ENGLAND, IN THE BRITISH MILITARY MANOEUVRES.

come an important adjunct to the equipment of an army; and it may not be many years before we shall see field guns hurried to the front by specially constructed motor machines; men in considerable numbers conveyed from place to place in big cars; ambulances motor driven, and field hospitals mounted on wheels and provided with

perimenting, so far, has been done with comparatively large and heavy cars. The light machine has undeniable advantages, however, as this season's endurance contests have shown. That this has been recognized, at least by English military men, is evidenced by the fact that a Cadillac light tonneau car, with 9 1-2-horsepower

mann, A. D. C. to the King of Denmark. The occupants of the tonneau are Major J. H. V. Crowe, R. A., on the left-hand tonneau seat, and the Italian attaché, Count Trombi, on the other side.

The motorcycle, as well as its larger relative, the automobile, is coming in for considerable serious attention from military

officers in various countries, who believe that it will form a valuable addition to their field equipment if it can be sufficiently substantial and reliable to stand the severe tests military service would necessarily entail. The subject of military motorcycles is just beginning to receive practical consideration from the army officers in this country, but in England and on the continent more progress has been made, there being quite a number of volunteer and regular motorcycle corps in existence. Germany, always progressive in matters military, has taken up the motorcycle, and the accompanying photograph shows a number of Teutonic Tommies making a thorough investigation of a machine.

As a result of growing agitation in England against the use of the highways for automobiles, the proposition has been put forward by members of the Roads Improvement Association to repair and adapt the old Roman roads to motor vehicle traf-



GERMAN SOLDIERS LEARNING THE MYSTERIES OF THE MOTORCYCLE.

fic. These old highways are, in many cases, almost entirely unused, and a sub-committee has been appointed to look into the practicability of putting them into usable condition. It is pointed out by a military authority that in the event of an invasion of England, the very probable extensive use of automobiles for military purposes would render such roads of the highest importance and value.

The Paris-Lyons Mediterranean Railway Company has inaugurated an automobile train service over its line between Paris and Montereau, a distance of forty-five miles. The cars are thirty-six feet in length, with first-class passenger compartments for twelve persons; second class, twenty-four, and accommodation for twelve additional on the platform at the rear. Each car costs \$8,000, as against \$22,000 for the ordinary steam locomotive.

Auto-Boat Race to Poughkeepsie.

Smith & Mabley-Crocker Match Changed to Open Race—Details of Construction of Croker's Herreshoff Built Boat.

THE proposed private match between the *Challenger*, owned by Smith & Mabley, and the new speed launch just completed by the Herreshoff Manufacturing Co. for Frank Croker, on Saturday, October 29, has been changed to an open race, and promises to be one of the important events of the season. In addition to the *Challenger* and the Croker boat, the *Vingt-et-Un II.* and the *Onontio* are entered, and several other fast launches are expected to enter before Saturday.

The original proposal was for a match race from New York to Albany and return, but this was changed to a shorter course, New York to Poughkeepsie, where fuel will be taken in a control, and return. The start will take place on Saturday

inches; the after end of the keel runs up to meet the transom at the waterline. The stem rakes forward at a moderate angle, the freeboard being about 3 feet; the forefoot is rounded off into the keel, which runs down gradually to a point a little forward of the mid-length, then up more rapidly. There is an outside keel about 2 inches wide and 1 inch deep, widening to 4 inches where the shaft passes through.

PECULIAR FORM OF STERN.

The stern is peculiar, and not easily described without a picture. The deck plan shows the breadth well amidship, narrowing in quickly toward the stern, which ends in a point. There is a raking transom, approaching a V in horizontal section, but with the sides slightly curved and also flaring out at the top. The depth of this transom is one foot, which is the freeboard at the stern.

The load waterline is quite straight in the forebody, with just a little hollow at the entrance; in the afterbody it runs to a point at the transom. All the thwartship sections from stem to stern show a flat V shape, the midship section having an easy bilge and a moderate flare to the topsides. The sections of the afterbody all are out to meet the deck, which is the widest part; there is no suspicion of tumble-home anywhere. The forward sections also show a good flare, in addition to the fairly high freeboard.

SECTION OF TURTLEBACK.

The crown of the turtleback is not a circular sweep, but flattened in the middle with a good round to the sides. The turtleback extends about half the length of the boat, completely covering the motor, and at this point it has a high crown. The deck beams are of bent oak, about 1-2 inch square, and spaced 5 1-2 inches on centers, the decking is of 5-16 inch white cedar, covered with painted canvas. Immediately over the motor the turtleback is cut, the two halves being fitted with hinges to open outward. From the termination of the turtleback the deck slopes down quickly alongside the cockpit, the after deck having very little crown. It is only from 12 to 15 inches above the water.

HULL IS DOUBLE-SKIN.

The hull is double-skin, the outer planking of mahogany, the frames being of bent oak, about 1-2 inch square and spaced 5 1-2 inches on centers, a few frames in the way of the engine being of larger size. The engine, a Mercedes car motor of about 90-horsepower, with the Mercedes belt reverse, is carried on two engine keelsons of oak running well fore and aft.

The cockpit is about 9 feet long, with a low flaring covering. The finish of the

morning, from the Columbia Yacht Club, foot of West Eighty-sixth street, New York.

HERRESHOFF'S LATEST IDEAS.

The Croker launch, which passes under the peculiar name of *X. P. D. N. C.*, is a most interesting craft, apart from the fact that she represents the latest ideas of N. G. Herreshoff, a master in the designing of the fastest of power and sailing craft. Like most Herreshoff boats, she is thoroughly original in form and detail. The striking features are the absence of purely freak ideas, and the very complete protection afforded by a long turtleback and a small cockpit.

The exact dimensions are not known, but the hull is about 45 feet long and between 5 and 6 feet in breadth. The greatest drop to bottom of keel amidship is about 12 inches, and at the forefoot it is about 8

boat, within and without, is shipshape and workmanlike, there being nothing temporary or flimsy. The wheel is about 22 inches diameter by 42 inches pitch, with three blades, each almost rectangular in shape, the breadth being about 6 inches at the hub and 5 1-2 inches at the outer ends, which are almost square. The rudder is of bronze, mounted just abaft the wheel, about 15 inches long on top, nearly rectangular, but with the lower forward corner cut away; the same rudder as in the old Herreshoff half-raters.

The bronze tiller swings over the deck, with flat-link bronze chain in the pulleys and light steel wire along the deck. Small and neatly made bronze turnbuckles are used to set up the tiller lines. An automobile wheel is used, about the middle of the cockpit.

The hull is very handsomely finished, the entire outside, below and above water, being varnished. The boat is undoubtedly very fast, and she is reputed to run easily without going off her trim. A test of this model with *Challenger*, *Vingt-et-Un II*, *Onontio* and other speed boats should give valuable results.

Auto-Boat Onontio.

A RECENT addition to New York's fleet of auto-boats is the *Onontio*, launched recently at the works of the Electric Launch Co., at Bayonne, N. J., where she was built for Commodore Harrison B. Moore, of the Atlantic Yacht Club. She is the work of two designers, Henry J. Gielow and James Craig, Jr., of New York, laboring together to produce a perfect combination of hull and machinery, with a view to high speed. Mr. Gielow is well known from his many successful yachts, both power and sailing craft, and by his work in general marine engineering. Mr. Craig has been engaged for the past four years in the building of the usual type of fairly heavy marine gasoline motor for cruising yachts, auxiliaries and working vessels. The new motor is a radical departure, every effort being made to produce a high-speed motor of great power with a minimum of weight.

The hull is 60 feet over all, 59 feet 9 inches on deck and 57 feet 11 inches on the water line, with a breadth of 7 feet and a draft of

1 foot 6 inches, the extreme draft being 3 feet. As in all of Mr. Gielow's later yachts, the dividing lines or ribband lines are the prominent features of the design, these being made perfectly fair and of easy sweep. The entrance is long and fine, and the raking midship section gives a clean run. The stem rakes forward and the stern is of the torpedo type, semicircular in plan.

The boat is built with a bent keel of oak, 10 inches wide amidships and 1 3-4 inches thick, with a stem worked from a hackmatac knee. The frames are of steamed oak, sided 7-8 inch, moulded 7-8 inch at heels and 3-4 inch at heads, spaced 8 inches on centers. Floors of white oak are used beside each frame. The planking is double, 3-8 inch mahogany outside and 5-16 inch white cedar inside, both skins running fore and aft, with a special cement between and well riveted between the frames. A heavy white oak sheerstrake, worked with a solid moulding, is used, with plank sheers of 5-8 inch mahogany and decks of narrow 1-2 inch white pine. There are six watertight bulkheads, each built of two thicknesses of 5-16 inch white cedar crossed diagonally and laid in cement.

A special feature of the hull is the fore and aft trussing from end to end, giving more than local support for the engine and also stiffening the entire hull. There are two trusses, parallel to the keel and about three feet apart, each with a lower member in the shape of a side keelson of yellow pine 2 by 2 1-2 inches, and an upper member 2 1-2 by 3 inches, with deep floors of hackmatac separating them, the whole being thoroughly bolted with Tobin bronze rod. The whole floor system of the boat is thus one large truss, and the engine bedplate is supported upon oak keelsons side by side with each of the upper members and resting on the hackmatac floors.

There are three cockpits, the forward one, of heart shape with pointed coaming, for the helmsman, the middle one for the motor, and the after one for the passengers.

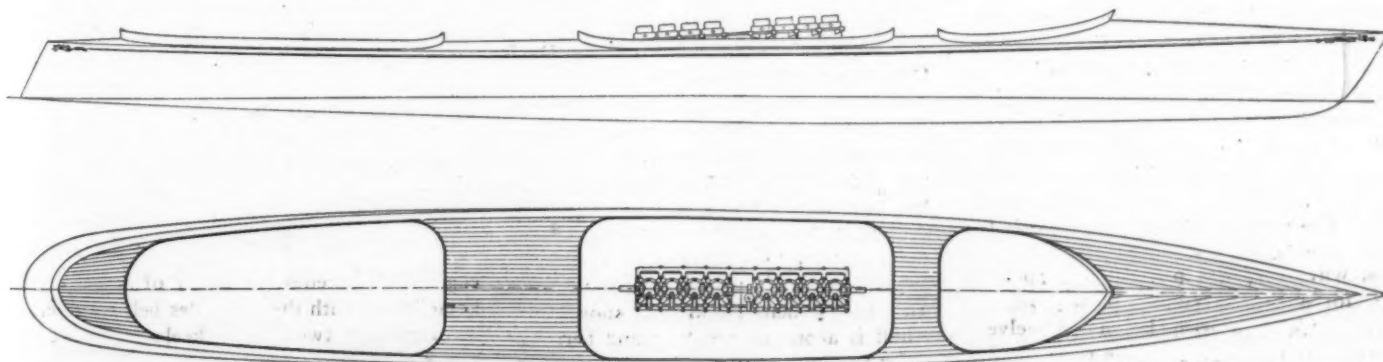
Apart from the motor itself, the details are original and interesting. The exhaust from each group of four cylinders is taken separately in large copper pipes and carried through the bottom of the boat near the keel. Two rudders are used, each rec-

tangular, about 12 inches deep and 15 inches long, placed on each side nearly abreast the propeller. Each is partly balanced, of bronze with a stock of the same metal, and below the deck each carries a short tiller, the pair being connected by a bronze rod, to which the steering lines are made fast. The steering wheel is of the ordinary yacht type, at the forward end of the cockpit.

The propeller is of the reversible type, three-bladed, the blades operated by bevel gearing from a central arbor within the hollow shaft. The hub is circular in form, ending in a long conical taper aft. The blades are of peculiar form, nearly circular in shape and about one foot in diameter. The maximum pitch of the wheel is something over 5 feet, with a diameter of 30 inches; the pitch may be decreased while running, or the blades may be feathered or reversed. The blades are controlled by a screw gear and handwheel, the latter similar to the steering wheel of an automobile, on the port side of the engine.

The motor follows in a general way the modern marine type of steam engine, with open framework, the cylinders supported on light stanchions running up from a cast bedplate. It is of the four-cycle type, with eight cylinders, each 7 3-4 inches diameter by 10 inches stroke. The cylinders are independent of each other, but arranged in two groups of four each, being practically two four-cylinder engines in tandem. The bedplate is of the box-girder type, cast in manganese bronze, in two pieces bolted together. Each cylinder is cast with four arms at the lower end, the stanchions passing through the arms. There are ten stanchions of steel about 7-8 inch in diameter for each four cylinders, with diagonal braces thwartship.

The water-jackets are cast with the cylinders; the cylinder heads are in the general form of a stuffing-box gland, turned to fit down into the upper end of the cylinder with a copper packing in the joints, each head having projecting lugs for the holding-down bolts. The heads which contain the valves are provided with ample space for the circulating water, the main water-jacket in each cylinder being connected with the water-jacket in the head by means of a separate brass pipe with unions, an-



OUTBOARD PROFILE, SHOWING WATER PLAN AND DECK PLAN OF THE NEW AUTO-BOAT ONONTIO BUILT FOR HARRISON B. MOORE, FROM HULL AND ENGINE DESIGNS BY HENRY J. GIELOW AND JAMES CRAIG, JR., OF NEW YORK.

other similar pipe carrying the water from the head to the exhaust pipe.

Special attention has been paid to the sizes and shapes of the inlet and outlet passages. Copper pipes of large diameter and with easy curves and no sharp angles are used for the gas, and the inlet valves are double and mechanically operated. Similarly, double exhaust valves are used, with large exhaust pipes sweeping down and aft in easy curves to outlets in the bottom of the launch just abaft the motor. Each group has its own exhaust opening, the outboard delivery being a bronze casting forming part of the bottom of the boat, the aperture being rectangular and about 4 inches by 18 inches—the greater dimension running thwartship—and raking aft. No muffler is used, but it is expected that there will be a free delivery of the exhaust without noise or back pressure.

The crank shaft is in two parts, connected by a clutch which forms a part of the flywheel, located between the two groups of cylinders. The clutch may be disconnected and the four after cylinders run alone. The flywheel is very small and light, only 18 inches in diameter with 5 inches face.

The main bearings and crankpins are bored out, and the shaft is shaped according to torpedo boat practice. The two end cranks of each part are at angles of 180 degrees with the two middle cranks, and each set of four is at angles of 45 degrees with the other.

The half-time shaft lies on the port side, abreast the cylinders, carrying the usual cams. It is driven from the main shaft by a vertical jackshaft with helical gearing, a feature of all the Craig motors. The valves are, as already stated, in the cylinder heads, two inlet and two exhaust. Two bronze brackets bolted to each cylinder carry a short shaft, on which rock two bell cranks, the vertical arm of each being in contact with its cam on the half-time shaft, while the horizontal arm, running thwartship over its two valves, bears on their spindles. One valve is timed to open a little in advance of its mate, so as to relieve the pressure.

The connecting rods are hollow, carrying oil to the crankpins; positive lubrication is provided to all bearings by means of the feeder between the two parts of the motor. The dynamo is also located between the fourth and fifth cylinders. The make-and-break ignition is used, as perfected in the older motors. The motor is designed to give 175 horsepower at 650 revolutions; it will, of course, be run much faster, with a proportionate increase of horsepower when bearings and pistons are in perfect condition. The total weight of the motor is but 3,500 pounds.

The *Onontio* has been under trial on Newark Bay and New York Bay for the past month, and, if reports be true, she will put all American records in danger. She will make her debut in the New York Poughkeepsie race Saturday.

Lava in Commercial Form.

Lava, in its commercial state, familiar to automobilists by its use for the insulation of spark plugs and for burner tips in acetylene lamps, is not the natural volcanic product, but is made of talc, ground and compounded into slabs, when it may be sawn, turned, drilled and otherwise machined with tools very similar to those used for the manipulation of brass.

Having been reduced to the proper forms, the pieces are kiln baked at a temperature of 2,000 degrees Fahrenheit, after which they are unaffected by any temperature lower than the baking temperature, and are so hard that they can scarcely be cut without the use of a diamond.

An advantage claimed for lava is that its expansion and contraction from changes of temperature are so extremely slight as to be practically negligible. Its insulating qualities are placed very high—from 75 to 250 volts for each 1-1,000th of an inch of thickness, the exact figure depending upon the density and other qualities of the sample tested. The cost of manufacturing lava is said to have been reduced so greatly that it is frequently cheaper than wood, horn, fiber or rubber compositions. Lava can be turned out in almost any shape desired, and screw threads can be cut on rods of this material with the greatest facility.

An interesting treatise on the subject is issued by the American Lava Company, of Chattanooga, Tenn., which has offices in both New York and Chicago. Its booklet is illustrated with a number of interesting engravings showing about 150 forms of lava products.

Denmark Wants Postal Stages.

The Danish Government, through a commission composed of post-office officials and especially appointed engineers, has been making investigations regarding the adaptability of the automobile for mail service over short routes, and has arrived at the following conclusions:

That the service rendered by the automobile, in cases where it has been used for mail and similar work, is of the best; that the motor vehicle has an advantage over railroad trains in the matter of punctuality on short routes, and that the automobile is a great saver of time in this work.

It is now the intention of the Danish Government to replace the present horse-drawn stage coaches with automobile stages, which will, in addition to transporting the mails, carry sixteen passengers and a quantity of freight each. To this end a contract has been entered into with a Danish concern to deliver mails over the stage routes for a period of ten years.

The vehicles to be used will be passed upon by the government commission, whose decision as to suitability will be final. The conditions they are required to fulfill are decidedly severe. The commission must first approve of the body of the vehicle. The

machine must be run 1,243 miles, at the manufacturer's expense, after leaving the factory, having on board an appointee of the commission all the time. The car will then be taken to pieces and every individual part carefully examined and cleaned, and after readjustment, will be run for three days more, still at the maker's expense. The machine will then be sent to Copenhagen, where it will be operated for three months by a driver furnished by the maker, accompanied, as before, by an agent of the commission. During this test the commission will pay the driver and furnish supplies and housing for the car. One-third of the price of the machine will be paid to the makers when the car is ordered, one-third upon its delivery at Copenhagen, and the remainder at the end of the three months' trial, if the vehicle is found satisfactory.

The car must have accommodation for sixteen passengers, including the driver, and also for a ton of freight, all of which must be hauled up a 9 per cent. grade at an average speed of twelve miles an hour. Raymond D. Frazier, United States Consul at Copenhagen, Denmark, who gives the foregoing information in one of his reports, states that the commission is desirous of interesting American manufacturers. Letters sent to the consulate will be forwarded promptly to the proper officials.

TO CONTINUE WORLD TOUR.

Special Correspondence.

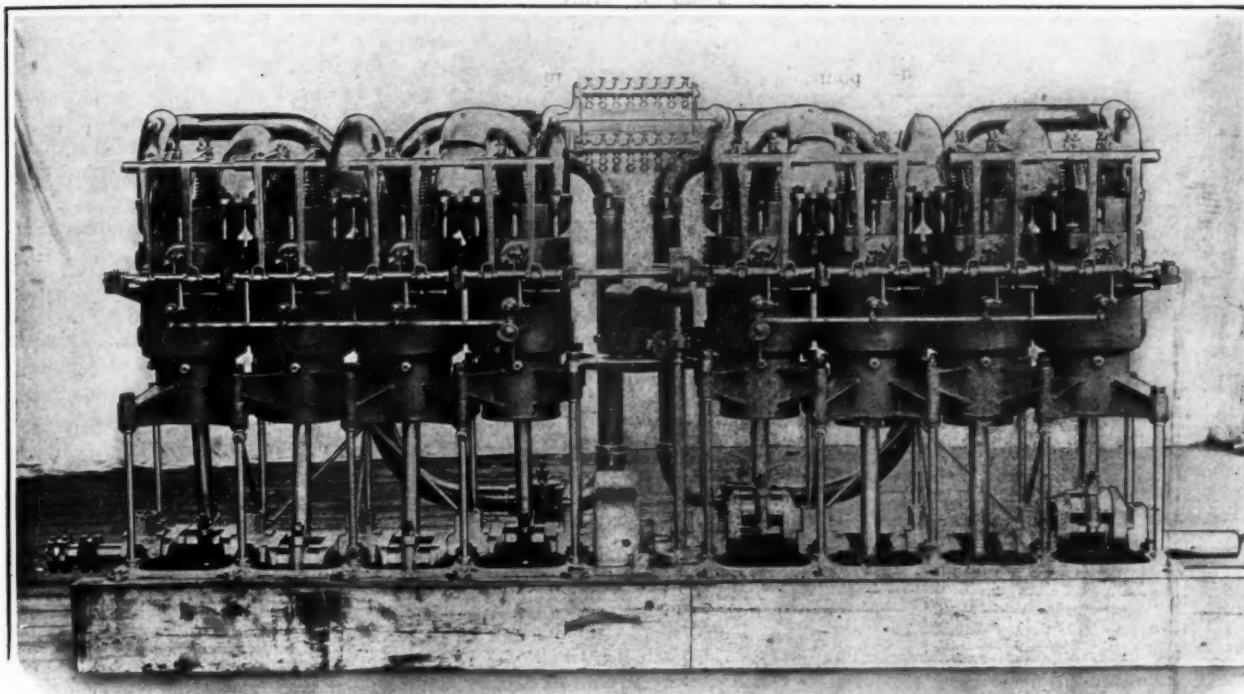
BOSTON, Oct. 24.—Two weeks from Wednesday, that is, on November 9, Mr. and Mrs. Charles J. Glidden, who are now in this city, will continue their world-girdling tour by automobile. Their car is now in Vancouver, where it was left after they had completed their tour across the continent, partly on the railroad tracks, this fall. They will ship their car first to Suva, capital of the Fiji Islands.

From the Fiji Islands the route which the Gliddens have mapped out is to New Zealand, Tasmania, Australia, New Guinea, Java, Malaya, Sumatra and Borneo, in all about 6,000 miles. The weather in these lands during our winter season is warm and dry, the climate of Wellington, New Zealand, being about the same as that of Boston in July. In New Zealand there is an information bureau for tourists under the direction of the government, and offices are located at all principal points. The scenery combines the beautiful features of all countries, and the points of interest can be reached by good roads.

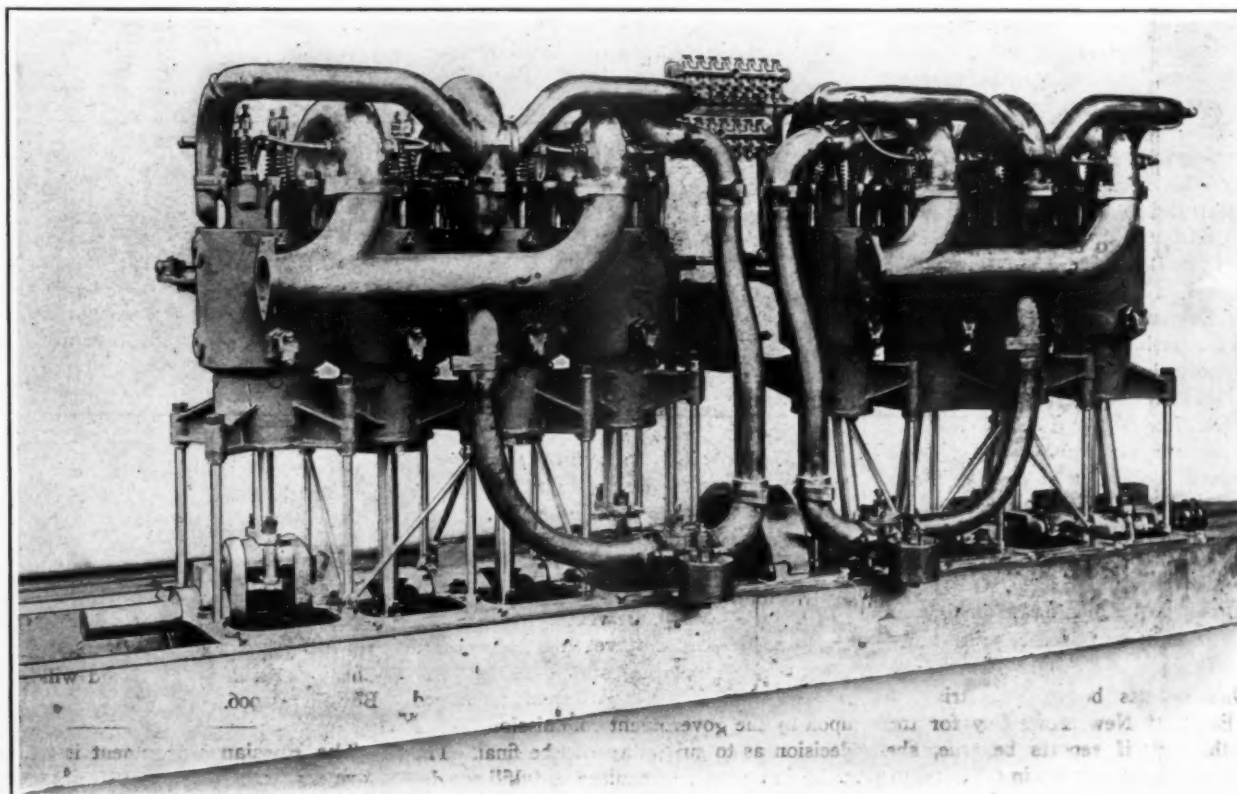
The Gliddens will take along the railroad wheels for their automobile, to be used in going to places that cannot be reached easily by the highways. During the close of 1905 they expect to drive in Japan, China, India and Egypt, and will return to Boston in 1906.

The Russian government is reported to have ordered several railroad inspection cars from the Olds Motor Works, to be used on the Siberian Railway.

EIGHT-CYLINDER FOUR-CYCLE CRAIG GASOLINE MOTOR FOR AUTO-BOAT ONONTIO.



Port Side, showing Half-time Shaft, just Below Tops of Cylinders, and Lower Ends of Bell Crank Tappets.



Starboard Side, showing Comparative Sizes, and Shapes of Inlet and Exhaust Pipes.

Development of Motoring in Toledo.

Special Correspondence.

TOLEDO, OHIO, Oct. 24.—When Peter Gendron, president of the Gendron Coal Co., brought his 6-horsepower Winton automobile to Toledo, his machine was the first owned in Toledo, if not the first ever seen on her streets, and it attracted much attention. That was in 1898, and now instead of one automobile there are more than 250 in Toledo, and the number is rapidly increasing. And Mr. Gendron, instead of being looked upon as a foolish experimenter, as he was then, is honored as Toledo's pioneer motorist. Many of the most ardent local automobilists bless the day when he first frightened horses on the downtown streets. His vehicle, then looked upon as a monster, did good work until a few months ago, when it was completely demolished by colliding with a street car.

From one car to 250 in six years tells in eight words the growth of automobiling in Toledo. Tourists and visitors from other cities state that for its size and comparative wealth Toledo has more automobiles in active use than any other city in the country.

The first machines used here were devoted almost exclusively to pleasure. While the great majority are largely confined to that use, yet business and professional men have adapted them to their needs within the past year. Few physicians—perhaps not more than a dozen—use automobiles regularly in their work, but this number is significant when it is borne in mind that little more than a year ago the doctors using them could be counted on the fingers of one hand.

Merchants are gradually adopting them as delivery wagons, and none who has tried them has returned to the use of horse and wagon. Business and professional men are also beginning to use them in going to and from their offices.

The latest and most successful tour by Toledoans has just been completed by Mr. and Mrs. J. R. B. Ransom and H. G. Tillson, who made a trip to Chicago, returning by way of Dayton. When alighting at their homes they were loud in their praise of that method of traveling.

The Toledo Automobile Club, with about 80 members, frequently arranges for and conducts Saturday afternoon runs. These usually take in a number of near-by towns and average from thirty to fifty miles, sometimes reaching as high as seventy-five miles in length. In the office of the secretary of the club is a record of nearly all persons owning machines in Toledo. It is kept as nearly up to date as possible, and shows that of the machines owned here about three-fourths are of the gasoline class. Of the remainder, perhaps a half-dozen are steamers and the rest are electrics. In the residence district, where women aspire to the ownership or the driving of an automobile, the electric machine is found.

Much of the activity in local automobile circles during the last two years has been brought about by the Toledo Automobile Club, which was formed largely through the personal efforts of Dr. Charles P. Wagar, who was president last year and is now secretary. In the summer of 1902 Mr. Wagar circulated a call among automobile owners for a meeting to form a club. The initial session was well attended and a temporary organization resulted. In a few days another meeting was called, and when it adjourned the Toledo Automobile Club had been founded. Its first officers were: President, D. A. Leffring; vice-president, C. P. Wagar; secretary and treasurer, G. D. Palmer, Jr.

Since then the club has been foremost in bringing about the improvement of country roads, the development of automobiling as a sport and a pastime, and the education of the public to the fact that the automobile is a necessity. A special committee has just completed a road map of a number of the counties in northwestern Ohio, and when the participants in the New York-St. Louis tour passed through the city they were presented with good maps showing the best roads leading out of the State. At present the club is urging concerted action by the Detroit, Cleveland, Toledo, Cincinnati and Chicago automobile clubs in the publishing of a map showing the best routes between these cities.

The club wielded not a little influence in automobile legislation at Columbus last winter, although it fared not so well in reference to city laws. The local license law, which is now being enforced after being a dead letter for two years, requires the payment of an annual registration fee of \$4 by owners of machines. This is looked upon as exorbitant, when neighboring cities require only a quarter or half as much, and already the club is laying careful plans for a change in the ordinance.

Well-furnished club rooms are maintained in the Toledo Conservatory of Music, and a modern clubhouse is already projected by the more progressive members.

The roads around Toledo, generally speaking, are fair, and little trouble is experienced in reaching any of the points of historic or scenic interest. A ride down the Maumee Valley on one side of the Maumee River and back on the other side possesses never-failing charms. The roads are excellent, and hardly is one historic spot passed until another comes into view. Here is Fort Meigs, there is the battle ground of Fallen Timbers, a little further on is the widely known Turkey Foot Rock, and so on, for a long list of interesting places prominent in the history of the old Northwest and of the campaign of "Mad" Anthony Wayne in northwestern Ohio.

To the north is Monroe, with its battle-famed River Raisin, and a few miles further on is Detroit, with its Belle Isle and boulevards. Inside the city limits of Toledo are parks and boulevards enough for an afternoon's good ride. They are extensive, well kept, and never so crowded as to make automobile driving unsafe or tiresome.

Mention should be made of the home of the Pope Motor Car Company. With its 1,000 employees, it turns out during the busy season from thirty to thirty-five machines a week. A number of improvements have been made in the factory during the present season, and within a short time it will add to its already extensive plant a large addition that is now building. In addition to this, there are four well-equipped retail stores and garages in the city, where machines of any make can be purchased or repairs secured.

An account of automobiling in Toledo, be it ever so brief, would be incomplete without at least a reference to Barney Oldfield. The city looks to him as her representative on the race track or on the road where a strong heart and steady nerve are required. Oldfield's mother is a quiet, nervous little woman, who takes great pride in her son's achievements.

H. H. Lyttle, also of this city, has created a name for himself as a driver this season, and his development is being watched closely by local enthusiasts.

The Fickle Crowd.

I.

An automobile broke down. The chauffeur tried to find out what was the matter with it, but could not, and the occupants of the vehicle had to get out and walk.

"Get a horse!" yelled the crowd.

II.

A horse balked. The driver tried every plan he knew of to start the animal, but it wouldn't budge.

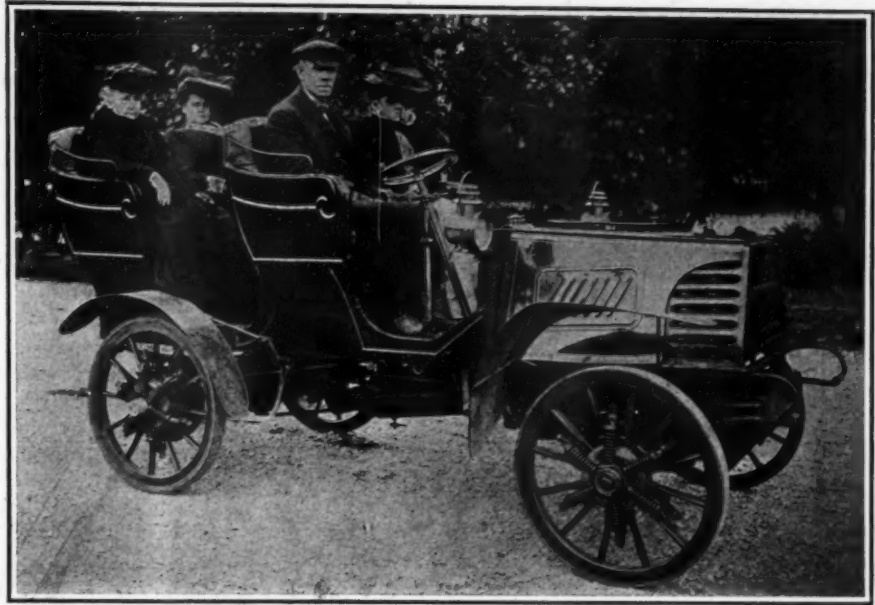
"Get an automobile!" yelled the fickle crowd.—*Chicago Tribune.*

Mr. Gurney, third clerk of the British embassy at Washington, who was riding in a fast automobile, and was fined by a Massachusetts squire in defiance of the law of nations and the peace and dignity of the kingdoms of half the world or so, is still in the newspapers. It is now recited that he was simply riding in the questionable automobile, and was the guest of another man, who was the real infractor of the village ordinances whose breaking caused the trouble in the first place. All right. We are willing to admit this and almost anything else that Mr. Gurney desires if he will only subside, go on with his writing or go home, and not obstruct the journalistic view of the Russo-Japanese war, the presidential campaign, the barb wire factory, the Kraehwinkel festival and other things of more importance than he is.—*Transcript, Peoria, Ill.*

Experimental Spring Wheels.

The accompanying illustration shows the essential features of a spring wheel invented by Dr. Horace A. Taylor, of San Jose, California, and experimentally applied to a heavy automobile built especially for W. E. Mack, of South Bend, Ind. The object of the invention is to secure a suspension that will render a pneumatic tire unnecessary by providing springs in its stead to absorb vibration caused by road inequalities. The wheel has a double hub, the inner member being movable in the plane of the wheel and prevented from moving laterally by plates or flanges. Six pairs of coil springs afford the required elasticity. Each pair is mounted on a yoke carried on the end of a threaded rod projecting from the periphery of the outer hub. A rod extending from the inner hub passes through each spring, sliding freely through the yoke, but being rigidly secured to the hub at its inner end. These rods serve to hold the parts in position and act as guides for the springs. The tension of the springs is regulated by nuts on the end-threaded rods passing through the centers of the yokes.

The device is said by Mr. Mack to have proved entirely successful, both in absorbing vibration and in transmitting power. If a spring breaks it can be replaced on the road with a very small outlay of time and money. The front tires of the experimental set of wheels are of plain steel, while those



AN INVENTION OFFERED AS A SUBSTITUTE FOR PNEUMATIC TIRES.

on the rear wheels are of channel steel, the channels being filled with hydraulic packing to give traction.

Tour of British Isles.

The Oldsmobile light touring car and Oldsmobile runabout which Charles Jarrott & Letts, Limited, of London, the English representatives of the Olds Motor Works, sent out on September 21 to make a run

of 3,000 miles through the British Isles, under ordinary touring conditions, recently completed 2,000 miles on schedule time with no serious trouble of any kind.

During the first part of the run the roads were in good condition, but rain set in later and the roads, especially in Ireland, were so slimy that at time progress was almost impossible. The schedule calls for 100 miles a day for thirty days. After fifty miles in the morning there is a noon stop for lunch, when adjustments are made, oiling done and supplies taken on, as in ordinary touring.

During the portion of the run that lay through Ireland, much interest was shown by the populace, who would frequently come considerable distances, it is said, to watch the cars go by. Some trouble was experienced with excited drivers, who would cover up the heads of their horses with sacks, hold down their ears and try in other ways to shut out the strange sight and sound from their animals. These, however, seemed to stand the shock better than their drivers.

A source of danger frequently encountered was the rather common appearance at night of wagons jogging along with drivers fast asleep and no lights shown. Stray animals also caused annoyance, a donkey on one occasion being run into by the light tonneau. The shock threw the animal and automobile into the ditches on opposite sides of the road, but neither was any the worse for the encounter. When he regained his feet the donkey stood watching the automobile with interest.



Three gasoline passenger 'busses like the one illustrated herewith, are in daily use on a regular route between Etna and Allison Park, Pa., a distance of five miles. These vehicles are operated by the Auto Traffic Company, of Pittsburg, Pa., organized some months ago. Citizens of Sharpsburg and Hoboken are said to have asked that the stage line be extended to those places. A fare of twenty cents is charged at present, and the enterprise is said to be paying well. Plans are being considered for the establishment of cross-town lines in Pittsburg, and also for the operation of special lines for the transportation of school children. The chassis of the bus illustrated is a Knox product, while the body was built by the Ellis Omnibus and Cab Company.

Experiments with motor vans in the Paris postal service having proved most satisfactory, it was decided to place a number of electric vehicles in service about the middle of this month, transporting mail between the central and suburban post offices. The service will be much improved by the saving in time.

Adams-Farwell Car with Rotating Motor.

A gasoline automobile embodying some ingenious departures from common practice has lately been produced, as the result of experiments extending over several years, by the Adams Co., of Dubuque, Iowa. Although the makers are withholding certain particulars, notably regarding the change gear device, the following details, made public by them, will be of interest:

The motor has three cylinders radially disposed about a common crankshaft, but, instead of the shaft rotating, the cylinders and crankcase themselves revolve, the shaft being fixed. Thus the cylinders, which are air-cooled, are at all times in a strong centrifugal air current of their own making, regardless of the speed of the car. This feature permits the use of large cylinders

der the rear seat in a partly closed compartment, and is geared to the speed changing mechanism directly below it, from which a single chain driving to the live rear axle completes the transmission system.

Examining the motor in detail, it will be seen that the large end of each connecting rod is suitably forked so that the single crankpin may accommodate three rod ends, and that the rods work on a common sleeve bushed with bronze, which performs the actual rotating about the crankpin and distributes the pressure, while the rods turn on the sleeve to the slight extent required by the in and out movement of the pistons. The rods are bronze castings.

The periphery of the crank case is built up of three sectors, each cast integrally with

currents, into which the exhaust gases discharge, the usual bark of the exhaust is subdued so that, as they express it, the discharge "acts upon the air like a sky-rocket, not like a gun."

The carbureter operates with a constant level, but no float is used, the gasoline being pumped through the upper pipe 19, Fig. 3, into the overflow cup 18, in which is a cavity covered with a watch crystal, through which the level may be noted and water, if any, detected. The surplus gasoline returns to the pump well 20 by the lower tube. From the cup 18 the gasoline passes through a needle valve, regulated by hand, to a second needle valve attached to the light swing valve across the air pipe at the top of Fig. 4. The air passes through the linen filter indicated by the dotted lines, and, impinging on the swing valve, lifts the latter and with it the second needle valve,

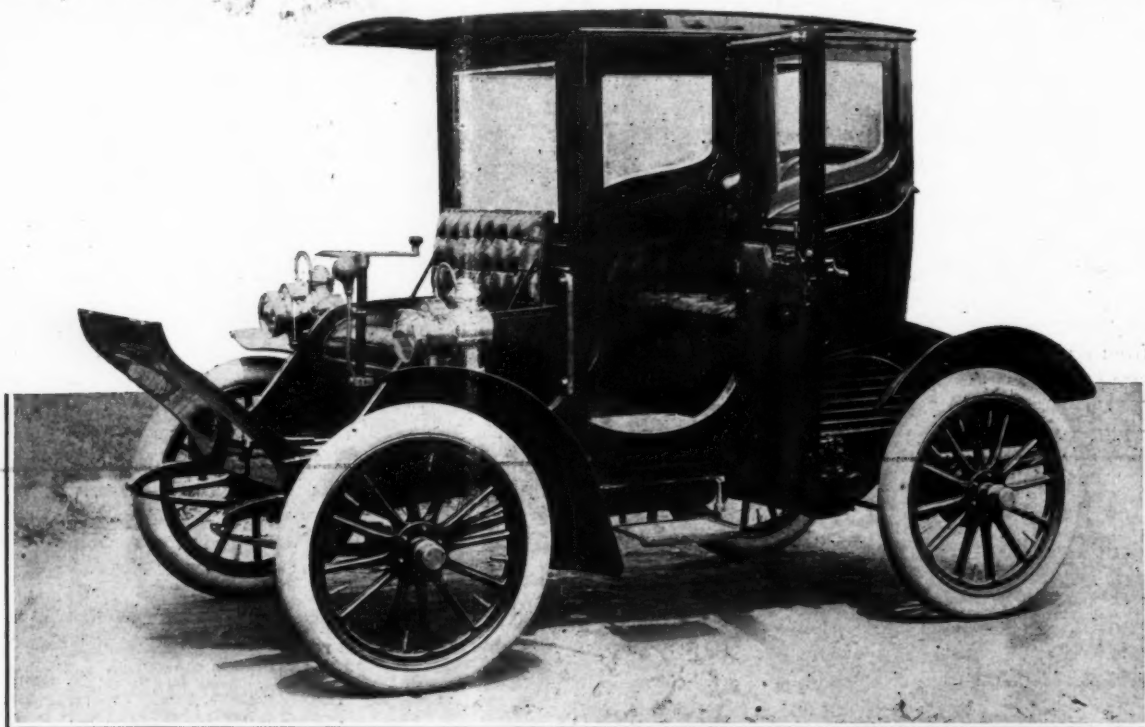


FIG. 1.—ADAMS-FARWELL "CONVERTIBLE BROUGHAM," HAVING NOVEL FEATURES OF BODY AND MECHANISM.

without overheating, the bore being 5 inches and the stroke 4 1-2. The motor is rated at 20 horsepower, and is stated to weigh 230 pounds, of which 190 pounds are in the revolving parts. The absence of the usual flywheel—here unnecessary—and the use of a single pair of cranks and a short crankcase for all three cylinders, explains the exceptional lightness.

Instead of being disposed in the conventional manner with the shaft horizontal, the motor revolves in a horizontal plane about a vertical axis, and transmits its motion to the speed changing mechanism by bevel gears. This is done partly for convenience in arrangement, and partly, no doubt, to get rid of the gyrostatic effect of so heavy a revolving mass in resisting the steering of the car on curves. As the illustrations show, the motor is located un-

its cylinder, and is held together in part by the cast steel top and bottom heads. A single cam, actuated by gears in the lower part of the case, actuates both the inlet and exhaust valves of all three cylinders. These valves have very light springs, the makers relying on the centrifugal force of the valves themselves to close them, except in starting and at low speeds, when the springs are needed.

A singular feature of the engine is that no muffler is employed, the exhaust gases passing directly from the cylinder into the centrifugal air currents drawing past the longitudinal ribs of the cylinders. Supplementary ports in the cylinder walls are uncovered by the pistons, so that the valves open against a pressure little if any above atmospheric. The makers state that, by reason of the high velocity of the air

causing gasoline to be taken up as the air enters the central mixing chamber, between which and the revolving crankcase is seen a sort of stuffing box.

The engine speed is controlled not by a throttle, but by a variable action of the valve cam, by which the inlet valve may be held open at pleasure for a greater or less period of the compression stroke. Thus a portion of the intaken charge is expelled, being transferred to the next cylinder, and only the last portion of the suction stroke of the latter draws fresh gas into the mixing chamber. Necessarily this reduces the theoretical efficiency of the motor, owing to the heating of the charges before they are used, but, on the other hand, the arrangement is favorable to a maximum efficiency of the mixing device.

But one spark coil is used, and no vibra-

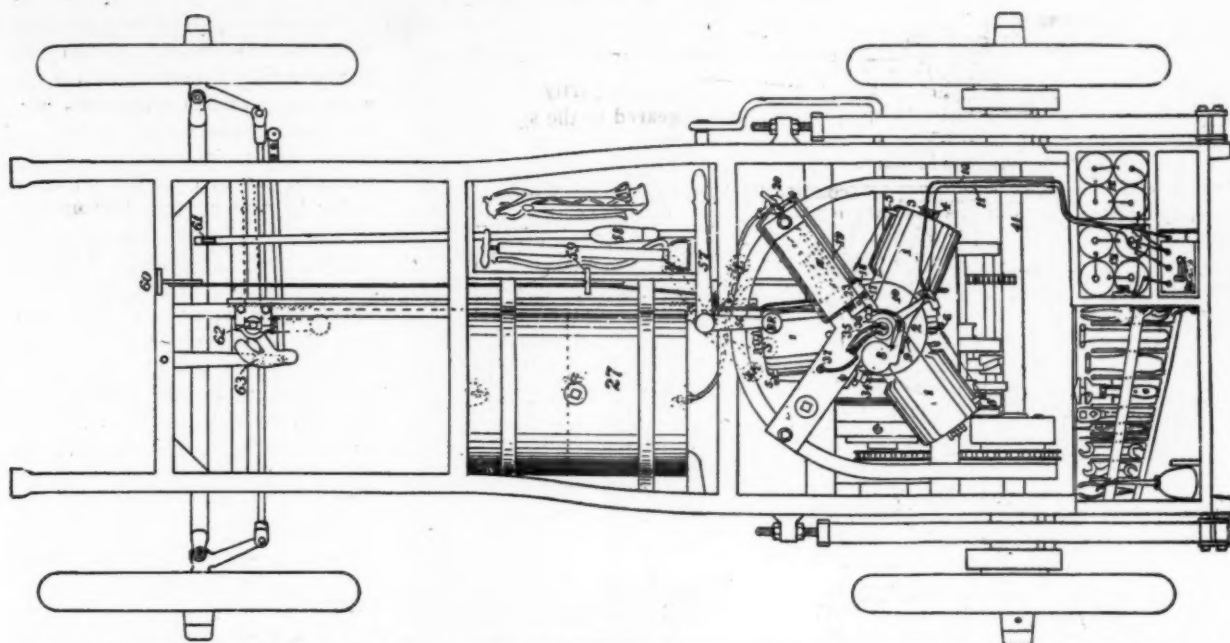


FIG. 2.—CHASSIS OF ADAMS-FARWELL CAR, SHOWING HORIZONTAL DISPOSITION OF ROTATING MOTOR UNDER REAR SEAT.

Description of Reference Numbers Applying to Figs. 2 and 3.—1, Cylinders. 2, Crankcase. 3, Exhaust valve. 4, Inlet valve. 5, Spark plug. 6, Porcelain insulator. 7, High tension distributor. 8, Circuit breaker. 10, High tension wire. 11, Primary wire. 12, Batteries. 13, Spark coil. 17, Crystal showing valve. 23, 18, Constant level gasoline reservoir. 19, Gasoline inlet and overflow pipe. 20, Gasoline well and pump. 27, Gasoline tank. 35, Cylinder oil tube. 36, Crank oil tube. 37, By-pass for oil. 54, Engine starting lever. 56, Clutch-operating lever. 57, Steering lever. 58, Engine speed treadle. 59, Hub brake pedals. 60, Forward position for brake pedal. 61, Forward position for treadle. 62, Forward position for levers 56 and 57. 63, Steering gear cam.

tor, one spark being produced on each primary contact. A centrifugal governor

advances the time of contact automatically to suit the motor speed, and likewise varies

the arc of contact from 1-36 of the engine's revolution at low speed to 1-12 at 900 r.p.m., thus saving the batteries at the slower speeds. From the coil the high tension current goes by wire 10 to the distributor 7, an insulated segment with a brass strip on the lower edge. From each spark plug 5 a wire runs to an insulated block 6, and 7 is so placed that the current jumps from it to 6, when the latter passes under, but does not quite touch, the brass strip. Thus an auxiliary spark gap is incidentally provided.

The ease with which any cylinder may be removed, by taking out the six side bolts and the four in the top and bottom flanges, is an especial point claimed for this motor.

The motor is supported by a stiff cast bronze spider, which is bolted to the frame of the car and into the center of which the lower end of the crankshaft is keyed. All the accessories, such as oil tank, carbureters and clutch operating mechanism, are likewise supported by this spider; and the speed changing gears are also carried by it and may be removed with it.

Angle steel is the material of the main frame. The wheel base is 84 inches, and the springs are all 40 inches long. A novel feature is the use of an auxiliary leaf on top of the main leaf of each spring. When the springs are lightly loaded, the ends of these auxiliary leaves are detached, but when the vehicle is to carry, at front or rear, its full complement of passengers, the front or rear auxiliary leaves are clamped down so that they will contribute their share of support. This operation requires but a moment's time, and results in very easy riding under light load, a thing usually hard to secure.

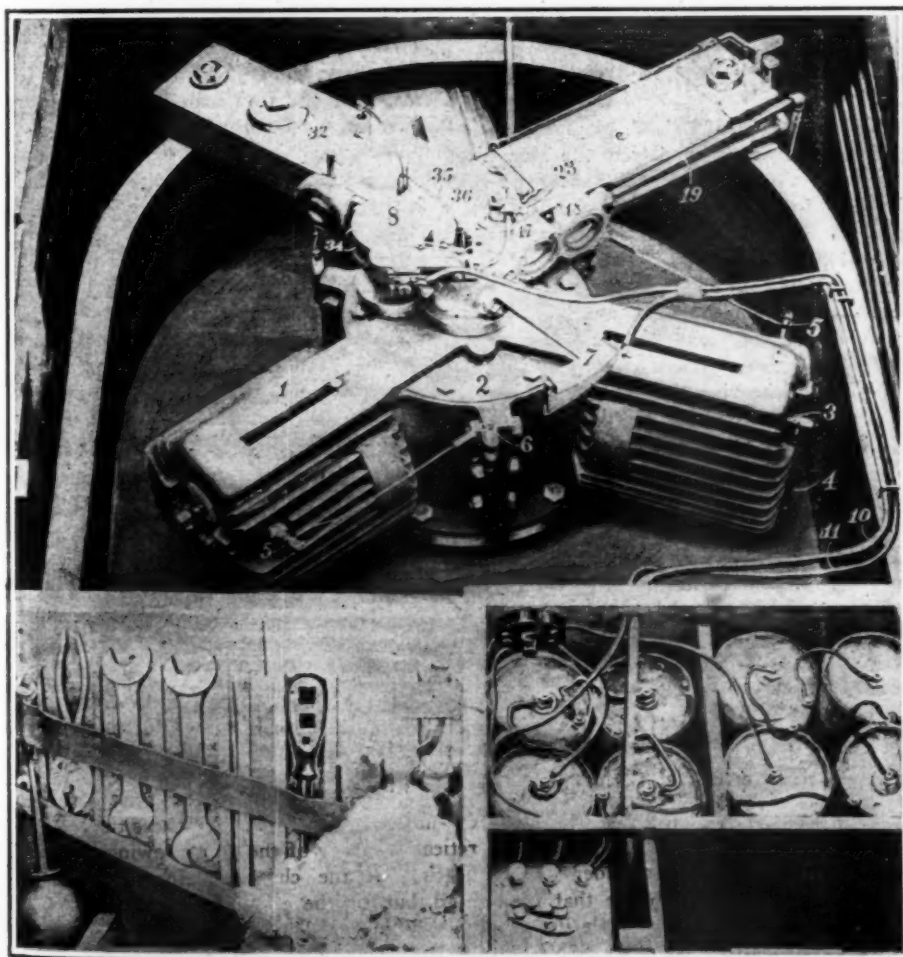


FIG. 3.—PHOTOGRAPH OF MOTOR IN PLACE SHOWING METHOD OF PIPING AND WIRING.

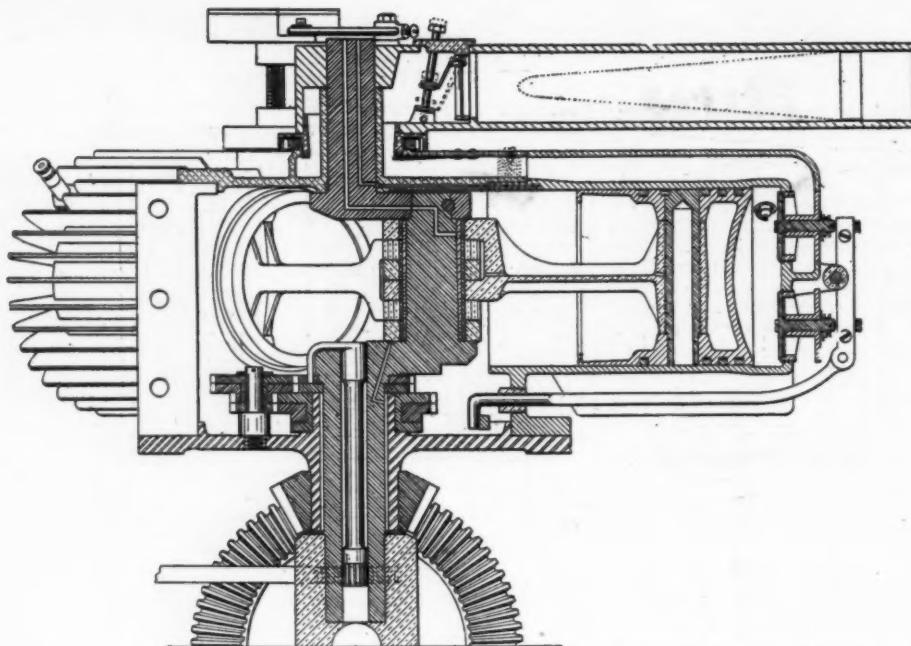


FIG. 4.—PART SECTIONAL DRAWING OF ONE-CYLINDER OF ADAMS-FARWELL MOTOR.

The independence of convention which marks this car extends to the body as well as to the chassis. Dissatisfied with the shut-in effect of the canopy top car, when its curtains are down, the makers have produced a "convertible" brougham, which is convertible in the sense that the front operator's seat may be closed up, the control devices taken up and transferred inside, and the car operated from the rear seat at short notice. The parts thus moved consist of the "controlling column," at the top of which are the steering and speed-changing levers, and one treadle under the left foot, by rocking which the valve cam is shifted to control the engine speed. In addition, there is for each set a pedal by which the emergency hub brakes are applied.

The steering gear, though operated by hand, is claimed to be practically irreversible, as it works through a cam movement, instead of direct. The speed changing or clutch lever, when straight back, locks the hub brakes. The first forward movement to the right releases the brake and engages the low gear, as indicated by letters in Fig. 2. When clear forward, it engages the high gear. The reverse is operated by the same lever when to the left of the braking position. The spark, as previously noted, is governed automatically.

The motor is lubricated by a multiple force pump, operated by a worm. This pump feeds four oil tubes, of which two supply an oil duct leading to the top of each cylinder, where the oil is taken up by the pistons. The third tube feeds the crankpin bearing, from which the surplus of oil escapes to the crankcase and is splashed on the valve gears and into the lower part of the cylinders. The oil tank is located close to the engine, where it will keep warm in cold weather.

The makers of this machine, which they call the Adams-Farwell motor, state that

all the novel features, such as revolving the cylinders around a vertical, stationary crank shaft, system of muffling, variable compression control, automatic spark regulator, control from front and rear seat, variable strength springs, carbureter, oiling system, etc., are the subjects of patents granted and pending in this and foreign countries.

Motor Well-Boring Machine.

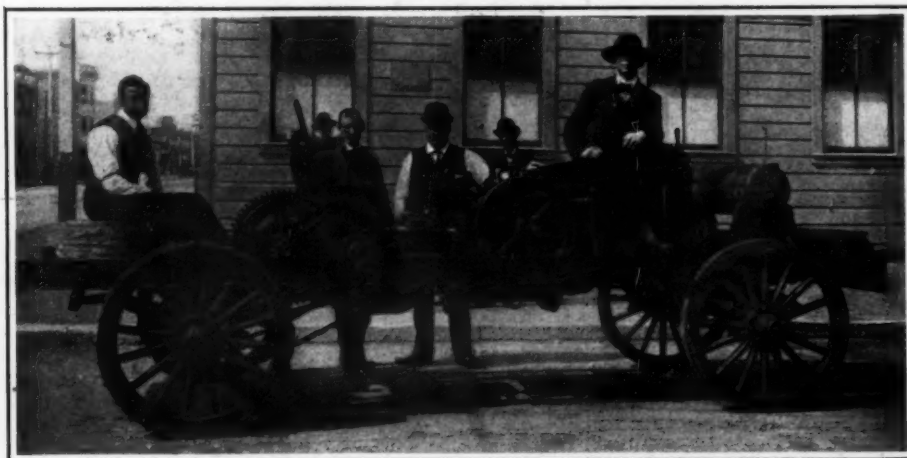
The latest commercial development of the automobile is reported from the Pacific Coast. A self-propelled well-boring machine has just been completed for J. A. Yates of Alturas, Modoc County, Calif., and will be used in the northern part of that State. Mr. Yates already has a well-boring machine in the field, and hauls it from place to place with horses. He finds this an expensive method, however, owing to the cost of keeping the horses, and has had the new machine built to overcome this and other difficulties.

Power is furnished by a gasoline engine with double opposed cylinders of 6-inch bore and 8-inch stroke, running at a maximum speed of 800 revolutions per minute. Valves are large and of nickel steel. The crankshaft also is of nickel steel, two inches in diameter, with main bearings two inches by four and one-half inches, bushed with bronze. Connecting rods are of steel, marine type. Ignition is by jump spark, the source of current being a dynamo. Speed of the motor is governed by throttle. Gasoline is supplied to the vaporizing chamber by means of a pump, the level being constant and the surplus returning to the tank through a by-pass. The transmission, which is the invention of P. J. Scharbock, president of the Hill Climber Auto Mfg. Co., that built the machine, gives three forward speeds and reverse, one lever being used for all speed changes. The gears are always in mesh, and the drive is direct on the high gear. The gears are of steel and bronze, the speed, change and differential gears running in the same oil-tight case. The three gear positions give speeds of 1 1-2, 3 and 6 miles an hour.

On account of the extremely bad roads and long hills to be negotiated in traveling through the country, the rear wheels, which are very heavy and strong, are provided with steel tires five inches wide with three-quarter-inch "grousers," riveted on to give a grip where traction is poor. In case the wheels cannot get grip enough to move the machine out of a bad place, a steel cable, 800 feet long, can be reeled out, secured to a tree, rock or "dead man" and the motor thrown into gear with the cable drum, thus pulling the machine out. The frame of the vehicle is constructed of steel of I-section, with channel steel cross members.

The machine was tested by its builders, and proved capable of climbing any hill that could be found with a road on it. The complete machine weighs 4,559 pounds. The engine weighs 720 pounds.

The same engine that furnishes the propulsive power is used for operating the well-boring machinery when the usual derrick is rigged.



AUTOMOBILE WELL-BORING MACHINE IN USE IN NORTHERN CALIFORNIA.

The Charter Touring Car.

The 50-horsepower four-cylinder touring car illustrated herewith embodies a number of features upon which the designer and builder, James A. Charter, of Chicago, has worked for several years, and which were first incorporated in a 16-horsepower motor for testing and experimental purposes. The motor, honeycomb radiator, fan and other details of the mechanism are arranged in the conventional manner. Each cylinder of the motor is a separate casting and can be removed from the aluminum crankcase without disturbing the remainder of the engine. All joints are ground so that no packing need be used in the entire motor. The cylinder heads are cast separately from the cylinders and are kept compression-tight by ground joints. The water jackets are made separately and slipped over the cylinders. The inlet valves are automatic, and are placed directly over the exhaust valves, in the same housing. Both valves are in cages and can be removed, without the use of tools, by loosening a thumb-nut. The cam-shaft, driven in the usual way by a pinion on the crankshaft, serves to drive the circuit-breaker and the circulating pump.

An ingenious arrangement for preventing the breakage of the pump in event of its being so obstructed as to be unable to revolve, consists of a spring drive. A flat spring is attached to the pump shaft at right angles, and engages with a double-arm driver on the end of the secondary shaft. Should the pump become clogged, the driving arms will merely cause the spring to

bend and then snap past, continuing to do so until the obstruction is removed. This ought to make sufficient noise to notify the operator that the pump requires attention. A by-pass allows the water to return to the tank if the pressure becomes excessive on account of obstructed piping. A pressure gauge keeps the driver informed as to the pressure on the water.

The crankcase of the motor is divided horizontally, and the lower half may be removed for examination of shaft, pistons, rods and bearings. Hand holes are pro-

vided in the upper part of the case for less extensive examinations. The drive from the motor is through a cone clutch, planetary change-speed gear, propeller shaft, with universal joint and bevel gears to the live rear axle.

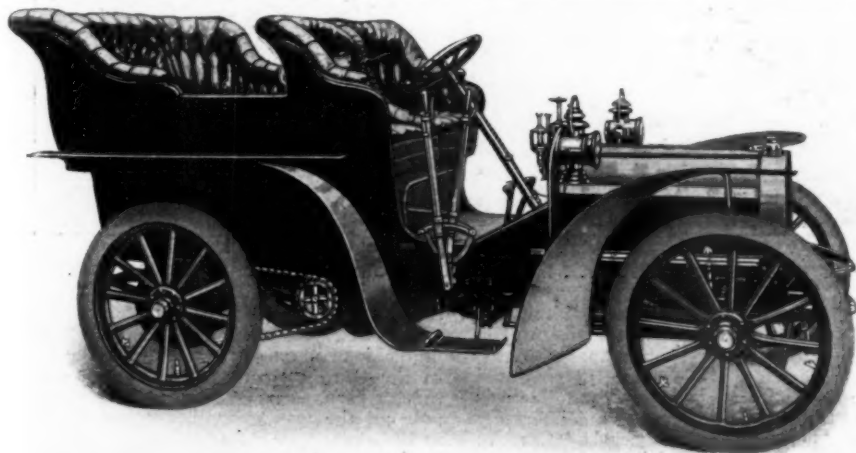
The transmission provides two forward speeds and reverse, the low-speed and reverse being brought into operation by means of brake bands, while the high-speed drive is direct. The toggle joint through which the high-speed gear is operated is adjustable by a single nut. The transmission case is kept filled with oil, and provision is made for the lubrication of the cone clutch in the flywheel from the transmission gear case. Connection between the motor and the change-speed gearing is through a heavy coiled spring that absorbs much of the shock of starting when the clutch is thrown in. This is also designed to relieve the motor from sudden jars, and is said to make the car smooth running to a marked degree.

The speed-controlling levers are on the steering column, a disposition rendered possible by the slight amount of force required to operate planetary gearing. The two forward speeds are operated by a lever on the right of the column, while a lever on the left is used for reversing. The brake pedal interlocks with the clutch, so that the application of the brake disengages the motor from the driving gear. The throttle and spark advancer are operated simultaneously by a small lever in the center of the steering wheel. It is stated that by means of this system of control the car can be run from four to forty-five miles an hour on the high gear.

The frame of the Charter car and the cross members that carry the mechanism are of pressed steel. The springs are semi-elliptic, both front and rear. The dashboard is of the hollow type.



CHARTER 50-HORSEPOWER TOURING CAR, BUILT IN CHICAGO.



The 24-horsepower Berg automobile, illustrated herewith, has a frame of armored wood so proportioned that a large and roomy body may be attached. The motor is of the four-cylinder vertical type, with cylinders of 4 inches bore and 5 inches stroke, fitted with automatic inlet valves. Ignition is by jump spark, a quadruple coil, located on the dashboard, being employed and three sets of storage batteries. The sliding gear transmission gives four forward speeds and reverse, and the drive to the rear axle is by means of double chains from a countershaft. The radiator is of the tubular type, and the water tank is located in the rear of the chassis. The springs are semi-elliptical, 42 inches long in front and 48 inches in the rear. Wheels are of wood, 34 inches in diameter, with 4-inch clincher tires. Steering is irreversible, and the steering-wheel column comes up through the dash instead of through the floor, which is thus left clear except for the pedals, of which there are three—clutch, differential brake and accelerator.

Big Crowd Disappointed at Brighton Beach.

Bad Turns, "Hold-Up" at the Gate, and Oldfield's Sulky Action Spoiled Sport at Saturday's Meet.

WRETCHED entertainment failed to repay one of the largest crowds that attended a race meet in the Metropolitan District for the long jaunt through the cold west wind to Brighton Beach track last Saturday. The expectation of seeing Barney Oldfield put up some fast exhibitions with the *Green Dragon*, and of seeing Théry and Caillois in exhibition rides, added to the stimulating influence of the Vanderbilt Cup Race upon automobile racing in general, drew out a much larger attendance than the management had anticipated, as was evidenced by the fact that the supply of programs was exhausted completely soon after the racing began.

The sharp turns of the mile track were so soft from a storm of Friday morning that the fast cars skidded badly all the way around them, and only one or two of the

racing was over. Evidently the coupon merely indicated that the lessee of the privilege from the track management assumed responsibility for the car and its contents during the time the racing was in progress. Owners of cars were not given the option of checking their cars or not as they preferred. As there were upward of 500 cars at the meet, the lessee must have taken in \$200 to \$250 in this way without giving anything in return.

The larger number of spectators, who attended the races by way of the alleged Brooklyn Rapid Transit trains, arrived in anything but a good humor, after spending three hours on the way, owing to the poor train service.

OLDFIELD DISPLEASES THE CROWD.

This early dissatisfaction, increased by the inability of the late arrivals to secure

each. Oldfield and C. G. Wridgway were the only contestants in the heat for American cars, the former driving the 60-horsepower green Peerless and the latter a 24-horsepower car of the same make. Oldfield won, of course, with ease, by more than ten seconds. Bernin, with the 60-horsepower Renault, and Guy Vaughn, with a 40-horsepower Decauville, came together in the heat for French cars, with the natural result that Bernin made a runaway, winning by almost half a minute. As Paul Sartori, with Vanderbilt's 90-horsepower F.I.A.T., was the only representative of Italy, the Italian heat was not run.

This brought Oldfield, Bernin and Sartori to the tape for the final, the American on the pole and Sartori on the outside. Oldfield got the best start and in the dash for the turn arrived first, Bernin in the center and Sartori on the outside, lapping his rear wheels, about a length back. They swung around the turn in a spectacular way, each throwing up clouds of dirt as the wheels skidded. In the backstretch Oldfield pulled away from Bernin and continued to increase his lead to the tape, finishing the mile about 150 feet in the lead, with Sartori trailing Bernin about four lengths back. Bernin



SOME OF THE MANY SPECTATORS' CARS PARKED AT BRIGHTON BEACH TRACK LAST SATURDAY UNDER A COMPULSORY CHARGE.

drivers of the big cars dared to take them at high speed without shutting off. Oldfield showed more fear of the turns than anyone else, cutting out his motor invariably at the tape in front of the grandstand and coasting around the first turn, whereas Guy Vaughn in the 40-horsepower Decauville and M. G. Bernin in W. G. Brokaw's 60-horsepower Vanderbilt Cup car took the turns better, with the motors acting.

HELD UP FOR PARKING PRIVILEGE.

The temper of the spectators who attended the races in their automobiles was ruffled immediately upon their arrival at the track by a hold-up at the gate with a demand for half a dollar for the privilege of parking their cars in the enclosure—a demand enforced by the presence of a city policeman apparently detailed for the purpose. In return for the 50 cents the driver of the car was handed the stub of a green paper check bearing a serial number, but was not directed where to place his car and was not assisted in locating it when the

programs and the mediocre sport witnessed, was increased to the point of disgust by the exhibition of poor sportsmanship shown by Oldfield in the trial of the International Cup race, when, realizing that he was beaten by Bernin in the Renault, deliberately slowed down, finishing a very bad third in 5:44 4-5, as against Bernin's 5:03 3-5.

When the program was brought to an unprecedentedly early close at 4:50 p.m. by the announcement that the referee refused to allow the running of the advertised record trials, owing to the bad condition of the turns, the spectators could not get away fast enough. The first of the electric cars back to the city were crowded to the steps, and the parties in automobiles raced back over Ocean Parkway at a pace that rivaled the cars on the race track.

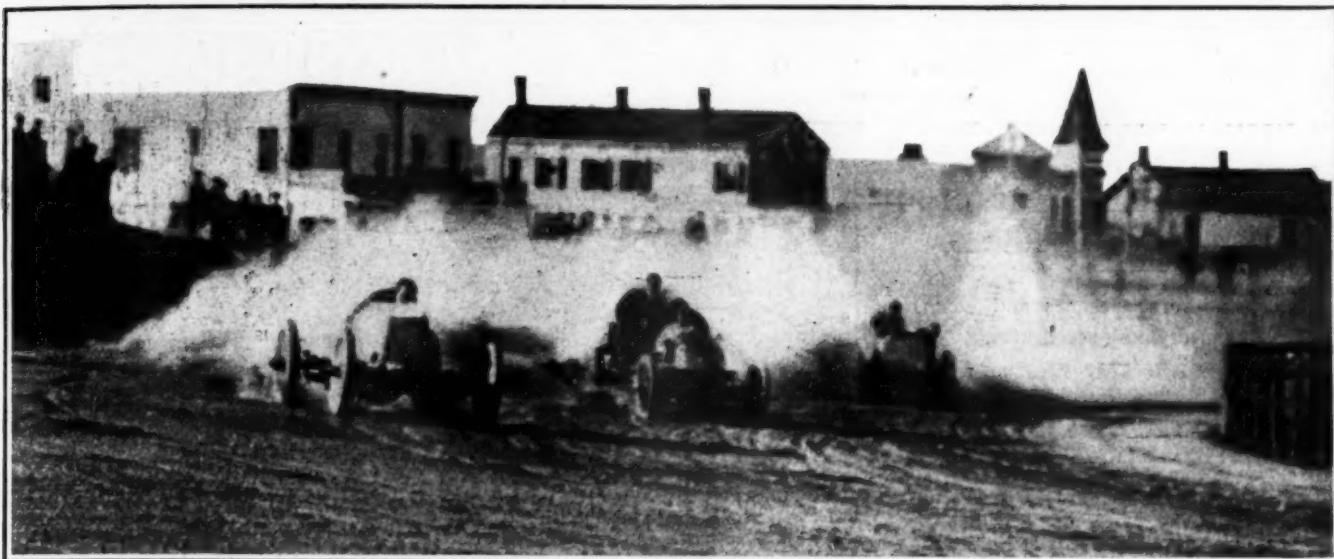
INTERNATIONAL CUP RACE.

The International Cup Race, run in heats by countries, was the feature of the program. Two heats were run, at three miles

took the turns at better speed than Oldfield and closed part of the gap, so that when Oldfield swung to the outside of the track in the third mile to cut into the pole on the far turn, as usual, Bernin, who kept the pole all the way around, reached the turn at the same time as the *Green Dragon* and they rounded it side by side, with the American high up on the bank. This apparently made Oldfield sulky, or frightened him, for he slowed down, allowing both Bernin and Sartori to pass him. The two foreigners made a good race to the finish, Bernin doing the fifth and last mile in 58 3-5 seconds, the fastest of the day, and winning by nearly a quarter of a mile.

DIAMOND CUP RACES.

When Bernin and Oldfield came together again as competitors a little later in the five-mile race for the Diamond Cup, which would have become the permanent property of the Peerless company had Oldfield won, Oldfield repeated his performance. C. G.



OLDFIELD, BERNIN AND SARTORI SWINGING AROUND THE TURN TOGETHER IN THE FINAL OF THE INTERNATIONAL RACE.

Wridgway, with the 24-horsepower Peerless, was the third competitor. The *Green Dragon* got away first and led around the turn and into the backstretch, where Oldfield slowed down, letting Bernin go ahead and win by three-quarters of a mile in 5:08 3-5.

THE HANDICAP RACES.

A novelty was introduced in the Brighton Handicap, the handicappers giving time allowance to the cars starting in the finals upon the basis of their performance in the qualifying heats of the same race. Another innovation was the handicapping of the cars in the mile race for the Seabreeze Cup, according to their retail prices. This might have worked out better had the race been restricted to gasoline cars, or been over a distance of five miles, but, as it turned out, a Stanley steamer, which was given 300 yards start, made a runaway of the race in a quick dash before its surplus pressure ran down, winning by 26 seconds from an Autocar that started at 100 yards and by 37 4-5 seconds from a Cadillac that started at 250 yards.

WRIDGWAY THROWN FROM HIS CAR.

The only approach to an accident during the afternoon was in the second heat of the Brighton Handicap that concluded the program. The winners had completed their last laps, but were making another circuit of the track at speed, apparently uncertain whether or not they had finished, when, as

he rounded the turn into the homestretch, Wridgway's seat came off and he was thrown out of the machine, lighting on the track on his shoulder and the side of his head. The car cut diagonally across the track and plunged through the outer fence, coming to a stop against the inner wall of one of the sheds. There was excitement in the stand and around the track, but the announcer quickly megaphoned that Wridgway was not injured, and soon afterward that popular driver ran down the track past the judges, vaulted the fences and disappeared in the clubhouse. As he passed the judges he told them he was not hurt, although blood on his face showed that he had got a nasty fall.

In the final of this race Oldfield, whose *Green Dragon* got away very slowly and was firing badly, was passed in the second mile by Vaughn in the Decauville and Bernin in the Renault, and at the end of the lap pulled out of the race. Bernin overtook Vaughn on the first turn of the fourth lap and passed, but was unable to overcome the handicap of 115 seconds given the new 25-horsepower Standard racing car driven by Philip Adams, which won in 8:17 by more than 100 feet. Bernin was second and Vaughn third.

THE SUMMARIES.

The summaries follow:

Seabreeze Handicap, one mile, for stock cars of any motive power retailing for

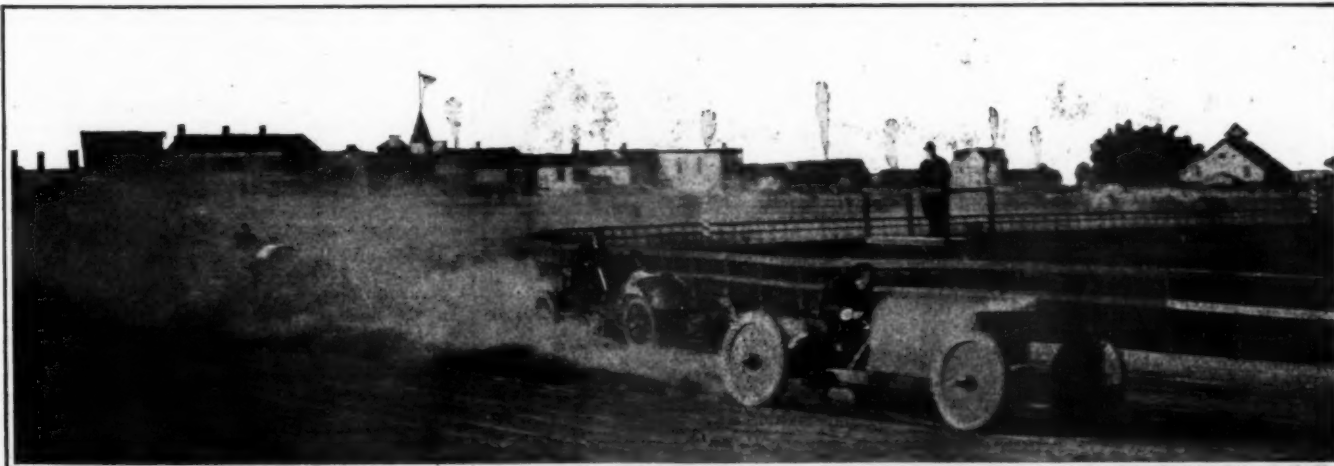
\$1,000 or less—L. F. N. Baldwin (10-hp. Stanley), 300 yards handicap, 1st, time, 1:27 1-5; Rodney Peeler (10-hp. Autocar) 100 yards, 2nd, time, 1:53 2-5; Clyde Adams (8-hp. Cadillac) 250 yards, 3d, time, 2:05.

Diamond Cup, five miles open—M. G. Bernin (W. G. Brokaw's 60-hp. Renault), 1st, time, 5:08 3-5; Barney Oldfield (60-hp. Peerless *Green Dragon*), 2d, time, 5:54 2-5; C. G. Wridgway (24-hp. Peerless), 3d, time, 6:01 3-5.

International Cup, free for all, heats by countries—First heat, three miles, French cars—M. G. Bernin (60-hp. Renault), 1st, time, 3:06 1-2; Guy Vaughn (40-hp. Decauville), 2d, time, 3:35. Second heat, Italian cars—Paul Sartori (A. G. Vanderbilt's 90-hp. F.I.A.T.), the only representative; heat not run. Third heat, American cars—Barney Oldfield (60-hp. Peerless), 1st, time, 3:25 3-5; C. G. Wridgway (24-hp. Peerless), 2d, time, 3:36.

Final heat, five miles—M. G. Bernin (60-hp. Renault), 1st, time, 5:03 3-5; Paul Sartori (90-hp. F.I.A.T.), 2d, time, 5:17 4-5; Barney Oldfield (60-hp. Peerless), 3d, time, 5:44 4-5.

Brighton Handicap, five miles open—First heat—Rodney Peeler (10-hp. Autocar), 225 seconds handicap, 1st, time, 8:49 4-5; M. G. Bernin (30-hp. Renault) scratch, 2d, time, 5:29 1-5; Philip Adams (25-hp. Standard), 35 sec., 3d. Second heat—Guy Vaughn (40-hp. Decauville), 50 sec., 1st,



BERNIN, WITH THE RENAULT, HOLDING THE POLE, OLDFIELD TRYING TO CUT IN, AND SARTORI TRAILING IN THE DUST.

time, 6:49; C. G. Wridgway (24-hp. Peerless), 45 sec., 2d, time, 6:50; Barney Oldfield (60-hp. Peerless), scratch, 3d, time, 6:54 2-5.

Final heat—Philip Adams (25-hp. Standard), 115 sec., 1st, time, 8:17; M. G. Bernin (30-hp. Renault), 25 sec., 2d, time, 8:19 1-5; Guy Vaughn (40-hp. Decauville), 45 sec., 3d, time, 8:24.

ST. LOUIS SUNDAY RACES

Kiser Lowers Track Times and Dorris Wins Everything He Enters.

Special Correspondence.

St. Louis, Oct. 24.—New records for the local course from one to five miles was the result of Earl Kiser's third attempt to lower the track records at the race meet Sunday. Kiser arrived Saturday from Cleveland with *Bullet No. 2*.

He was scheduled for two exhibitions, one at five miles and one at ten miles, but after his failure to lower the times of Oldfield and Webb, asked for a third chance. This time he succeeded in putting up new figures up to five miles. He beat Oldfield's mile in 1:04 3-5 by 2 1-5 seconds, and A. C. Webb's five-mile mark of 5:25 by 6 seconds.

Kiser said that the track was very slow and that the time here was harder to make than less than one minute to the mile on the Eastern tracks.

G. P. Dorris, with a 24-horsepower St. Louis, won everything in which he entered. The local driver of the White could not get it to working right until the last event, which he won easily.

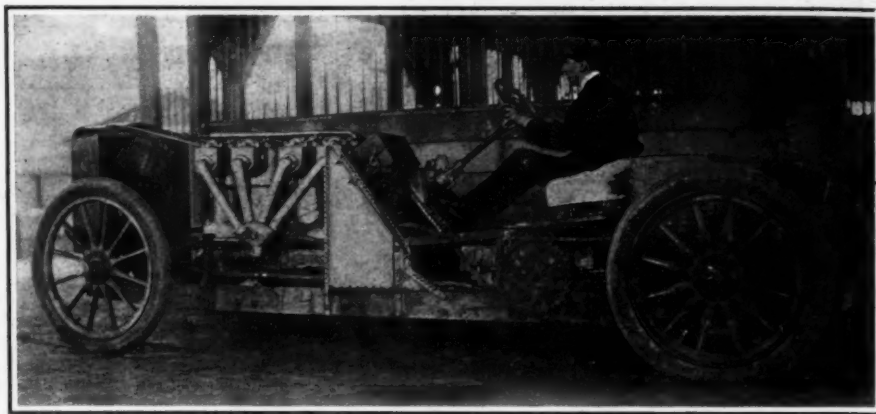
The Marion people sent D. J. Hayden direct from the Indianapolis factory to drive the Marion in the light-weight events, but the best he could do was second place in each.

The weather was all that could be desired, and more than 2,000 spectators were in attendance.

THE SUMMARIES.

Five-mile exhibition by Earl Kiser.—Time by miles, 1:10, 2:21, 3:31, 4:40 3-5, 5:49 3-5.

Five miles for cars weighing 1,432 to 2,204 pounds, with road equipment, driven by



HARKNESS'S HOME-MADE RACER THAT IS ALWAYS ENTERED BUT NEVER STARTS.

owners and carrying four persons.—C. A. Tileston (14-h.p. Renault), 1st; Edward Godsey (24-h.p. St. Louis), 2nd. Time, 8:30 2-5.

Five miles for motorcycles up to 110 pounds.—E. F. Martin (13-4-h.p. Miami), 1st; Bahnsen (13-4-h.p. Indian), 2nd; E. Silverberg (13-4-h.p. Rambler), 3rd. Time, 7:55 1-5.

One-mile record trials for cars weighing 1,432 to 2,204 pounds.—G. P. Dorris (24-h.p. St. Louis), 1st; C. A. Tileston (14-h.p. Renault), 2nd; W. W. Leathers (10-h.p. White), 3rd. Time, 1:23.

Ten-mile exhibition by Earl Kiser.—Time, 11:13.

Five-mile race for cars weighing 1,432 to 2,204 pounds.—First heat—G. P. Dorris (24-h.p. St. Louis), 1st; C. A. Tileston (14-h.p. Renault), 2nd; W. W. Leathers (10-h.p. White), 3rd. Time, 6:25 1-5. Second heat—G. P. Dorris (24-h.p. St. Louis), 1st; C. A. Tileston (14-h.p. Renault), 2nd; W. W. Leathers (10-h.p. White), 3rd. Time, 6:56.

Two miles for cars weighing 881 to 1,432 pounds.—E. B. Godsey (12-h.p. St. Louis), 1st; C. N. Hayden (16-h.p. Marion), 2nd. Time, 3:28 2-5.

Five-mile trial for track record by Earl Kiser.—Time by miles, 1:02 2-5, 2:06, 3:10, 4:14 2-5, 5:19.

WASHINGTON SOMNOLENT.

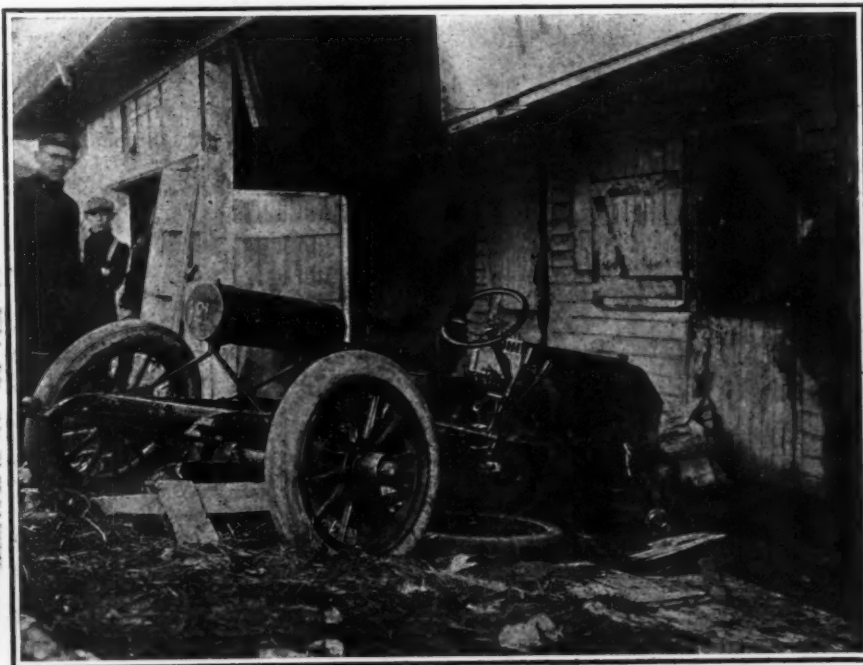
With All Conditions Favoring Good Sport There is "Nothing Doing."

Special Correspondence.

WASHINGTON, D. C., Oct. 24.—It is apparent to the most casual observer that there is something wrong with the automobile spirit in Washington. This fact was forcibly brought out on Labor Day, when the Central Labor Union undertook to promote an automobile parade in the morning and a series of races in the afternoon. Out of a total of 850 registered cars in the National Capital, only sixteen turned out for the parade, while more than 200 automobilists had signified their intention of participating.

The races, as has already been reported in *THE AUTOMOBILE*, were a "frost," so far as sport was concerned. One of the greatest crowds in the history of the Bennings race track, which is conceded to be one of the finest and most picturesque in the country, turned out in anticipation of seeing some stirring events. A program of eight events had been framed, with a total of thirty entries. When it came time to toe the scratch nearly two-thirds of those who had entered got "cold feet," and it was necessary to cut out three numbers, while the remaining five had hardly enough contestants to make things interesting. Handsome silver cups had been donated for prizes, and there was every incentive for the local amateurs to go out and show a representative Washington crowd what they could do in the way of driving a car around a mile track. Had it not been for the presence of Frank Kulick, in the little Ford racer, the afternoon would have been most dreary.

If the Central Labor Union can muster a crowd of 10,000 to see a badly-advertised and poorly-managed meet, it is evident that automobile racing has many friends in Washington. A well-managed meet, with several of the stars as a drawing card, would undoubtedly net a handsome revenue for the promoters and be a distinct aid to the local dealers in the way of making sales. With a population of less than 200,000 white people, the National Capital has close to 900 automobiles in use. This is a good ratio that few cities exceed. As an automobile market Washington is one of the best in the country, for it is here the wealth and fashion of the country comes to spend a good portion of its time. There are hundreds of officials in the Government service, foreign ambassadors, ministers and attaches of legations, and private individuals of wealth who make Washington their home, and who will ultimately be in the market for automobiles, either this season or some season to come.



WRIDGWAY'S CAR AFTER THROWING ITS DRIVER AND PLUNGING THROUGH SHED.

Correspondence

Anti-Freezing Solution.

Editor THE AUTOMOBILE.

Sir:—Kindly inform me what is the best recipe to use to prevent water from freezing in a gasoline car in winter. Is there anything that can be used without harm to the copper pipes, and the like? What about refrigerating oil? I have seen that spoken of.

F. E.

Keene, N. H.

Certain grades of refrigerating machine oil have been used for cooling purposes in winter, with good success, apparently, though we know of no very conclusive experiments in that direction. The material most commonly used is a solution of calcium chloride in water, of density depending on the temperature to be resisted. A mixture of 3 pounds of the chloride to one gallon of water will freeze at about zero Fahrenheit, and a mixture of four pounds to the gallon at about 20 degrees below zero. In buying, be careful to get a good commercially pure grade, as impurities are likely to have an injurious effect on the valves and other metal work. Do not get chloride of lime by mistake. This material is very corrosive to iron and steel, and is, without question, the cause of injuries often laid, incorrectly, to calcium chloride.

Losses from the chloride solution, due to evaporation, should be made up by adding pure water. Losses by leakage should be made up by adding fresh solution. It is well to draw off the solution once a month or so, and wash out the pipes, and the like, before replenishing with fresh solution.

Anti-Freezing Solutions in Winnipeg.

Editor THE AUTOMOBILE:

Sir:—In western Canada, where the thermometer often falls 40 degrees below zero, the question of a non-freezing solution for use in the water circulating system is agitating the minds of automobilists, and it is hoped that the difficulty will be overcome by the use of a new compound, which Professor Kenrick, the government analyst and secretary of the Winnipeg Automobile Club, has prepared. The formula for the preparation is at present a secret, but it has stood numerous tests made at 40 degrees below zero without showing any signs of freezing.

A mixture used by Mr. D. Bain with great success all last winter, during which the machine was protected only by a tarpaulin cover, was composed of 60 per cent. glycerine and 40 per cent. water, and, in spite of last winter being the coldest experienced in the West for a number of years, no trouble from frozen water pipes was experienced. The drawback to the use of this preparation, however, lies in the fact that the acids always present in commercial glycerine affect the tanks and coils, eating into

the surface and weakening them considerably.

Mr. Bain is now endeavoring to find a neutralizer to remove this trouble, and would be glad of any hints from users of automobiles during the winter months that would help him in his experiments. The question was brought forcibly home to automobilists here during a recent cold snap, no less than six machines being placed on the retired list in one night, when the temperature unexpectedly fell well below the freezing point.

A. E.

Winnipeg, Manitoba.

Another Anti-Freezing Inquiry.

Editor THE AUTOMOBILE.

Sir:—Kindly inform me what is the best anti-freezing mixture to use in an automobile in winter. Is kerosene safe? Last winter I used calcium chloride and nearly ruined my valves and their attachments owing to the thick rust which resulted. I am told 20 per cent. glycerine solution has to be replaced every two weeks else it becomes thick, and also is not efficient in coldest weather. I use my machine in my professional work in place of a horse, hence the problem is an important one.

Dr. C.

Auburn, N. Y.

See the answer to F. E. in the first column on this page. Probably your dealer gave you chloride of lime by mistake; or a cheap grade of calcium chloride. The glycerine solution has to be replaced somewhat frequently, and it rots the rubber hose commonly used for connections. Kerosene is not safe for use in the water jacket.

A Bicycle Idea.

Editor THE AUTOMOBILE.

Sir:—Would there be any weight to an invention of the front wheels of an automobile in which they are made to slope as on a bicycle—that is, when turning corners, and the like?

It seems to me that as the center of gravity of the car would be lowered in proportion to the turning of the wheels, the life of tire, steering knuckles, strain on hubs and a few unseen points would be quite pronounced. The line drawn through center of gravity, the hubs and tread would be quite straight, and breakage of steering apparatus would be reduced to a minimum; skidding, too, would be less.

J. H. P., Jr.

Cleveland, O.

Giving the steering pivots a backward rake at the top relieves the steering connections to some extent of road shocks, but it complicates the design of the connections and makes correct action more difficult when turning corners. For this reason the pivots are generally vertical or slightly inclined inward at the top, which has a greater effect in reducing road shocks than the backward rake.

Steam Car Power Plant.

Editor THE AUTOMOBILE.

Sir:—I am thinking of building a steam runabout to carry two persons, and would like to ask you will a 2 1-2 by 3 inch steam engine be large enough? And would it be necessary to use back gears to climb hills? I think of making a vertical fire tube boiler 19 inches diameter and 20 inches high. Would that size be right? How many, and what size flues would be best? Where can I get the flues? Also, where can I get a burner for such a boiler? I have never had any experience with this class of machinery, and any information will be thankfully received.

A. A.

Cherry Creek, N. Y.

The double cylinder, double acting steam engine of 2 1-2 inch bore by 3 inch stroke will be large enough for a runabout weighing not more than 900 or 1,000 pounds. It is not customary to put reduction gear on a steam engine of this class, but there are good reasons to think that it would be an advantage to do so. You will have to make your boiler of the same diameter as the burner, and burners are made, we believe, only in even diameters, as 16, 18 and 20 inches. The 18-inch burner and boiler would be ample for your rig. Write Charles W. Miller, 97 Reade Street, New York, or E. J. Willis, Park Place, New York, or to the Automobile Supply Company, Chicago, for the burners. You can get tubes for your boiler of the Ansonia Brass and Copper Co., Ansonia, Conn., or the Waterbury Brass Company, Waterbury, Conn., or of the U. T. Hungerford Brass and Copper Company, Pearl and Park Streets, New York City. The tubes should be 1-2 inch outside diameter, and about 14 gauge, and the tubes should be spaced 11-16 inch or 3-4 inch center to center.

Wheels Lifting on Curve.

Editor THE AUTOMOBILE.

Sir:—To settle a dispute kindly answer the following: An automobile going at a high speed turns a sharp curve, which causes it to turn on two wheels. "A" says the wheels on the outside, or those which are away from the curve, will leave the ground. "B" says the wheels nearest the curve will leave the ground. By answering the foregoing you will greatly oblige.

J. H. L.

New York.

As the centrifugal force due to turning tends to carry the vehicle forward in a straight line, and as this force is resisted only by the contact of the wheels on the ground, it follows that it will tend to tip the vehicle over toward the outside of the curve. The inside wheels therefore will be those to lift. The very latest foreign racing machines are so designed that they do not lift at all on corners when traveling at any speed that the driver would attempt.

Automobile Situation in St. Louis.

Large Increase in the Number of Machines Used.—Particulars of the Various Concerns in the Trade.

Special Correspondence.

ST. LOUIS, Oct. 24.—Probably no other industry in St. Louis has shown such remarkable advancement in the present year as has the automobile business. At the beginning of the year there were about 200 licensed motor vehicles in the city, and many of these were transfer and truck automobiles used by the large manufacturing concerns and retail houses. At the present time there are more than 700 licensed cars in St. Louis, about 550 being private machines, and the others transfer and trucking vehicles.

The August tour from New York to St. Louis accomplished a great deal for the automobile conditions of the Middle West and the country around St. Louis. There were more than 300 cars in the mammoth parade held during automobile week, and,

tour, and the club is now working for higher speed limits. A bill was introduced recently into the House of Delegates providing for a ten-mile-an-hour limit in the crowded districts down town and a twelve-mile limit farther out. The St. Louis Automobile Club, of which A. B. Lambert is president, is behind the pending bill, and it is understood that the club has assurances that this bill will become a law.

MANY CHANGES FOR THE BETTER.

A number of changes for the better have been brought about through the efforts of this organization, which is working for more favorable state legislation, as well as better street conditions in this city. The club membership has grown in the past year from about 30 to 150, with such men as

ing year. It is a fairly conservative estimate that within a year there will be 2,000 automobiles owned by St. Louis residents.

The tendency of the dealers is to locate on Olive street. Most of the dealers are located on Olive street between Grand avenue and Walton street. Nearly all started with practically nothing in some little out-of-the-way place, and have increased their trade and moved farther west on Olive street, until now they are centered well out.

CONCERNS IN THE TRADE.

Among the largest dealers in the city, as well as the oldest in local trade circles, are the Halsey Automobile Co., and the Mississippi Valley Automobile Co. The former, organized in September, 1900, is located at 3924 Olive street, having moved to its present location in March, 1903. The business is now capitalized at \$30,000, with A. C. and O. L. Halsey as the principal stockholders. The Halsey Company handles the Packard, Winton, Franklin, Stevens-Duryea and Cadillac cars. It does a general storage and repairing business and



A TYPICAL AUTOMOBILE HEADQUARTERS IN THE CITY OF SAINT LOUIS.

barring those of the tourists, they were strictly St. Louis owned machines.

MANY NEW CONCERNS.

The number of concerns dealing in automobiles has increased to seventeen, several of the largest having been organized in the last twelve-month. With the rapid growth of the trade, there has developed increased interest in the conditions governing and affecting automobiling in and around the city. Efforts have been made to improve these conditions, such as unfavorable city ordinances and the antipathy of a large section of the non-motoring residents to the latest mode of travel.

St. Louis at present is handicapped by ordinances that retard the growth of motoring; apathy of the automobilists last winter and earlier, as well as insolent disregard for the safety of others by a few reckless drivers, being responsible for their passage. These limit us to eight miles an hour on the streets and to six miles an hour on the park drives. Happily, there was an awakening about the time of the World's Fair

Mayor Rolla Wells, Wallace Simmons, Louis and Charles Lemp and other prominent business men of the city who are active workers in behalf of automobiling. Probably the one man who has done more than any other is President A. B. Lambert, who has worked incessantly for better laws.

A bill for a state law, which the St. Louis and Kansas City clubs are backing, calls for a maximum speed of fifteen miles an hour throughout the state and a uniform license fee. An effort will be made during the next session of the Legislature, which convenes the first Tuesday in January, to have this bill passed. The greatest objection to the present St. Louis ordinance is that clause which requires an annual license fee of \$10. The local motorists are greatly incensed at this requirement. All the benefit they derive from it is the privilege of running their autos over the streets of the city, which is their constitutional right anyway. With more favorable laws, better paved streets and increased interest in automobiling, St. Louis should go to the front rapidly as an automobile center in the com-

has storage accommodations for 250 machines. The building is a two-story structure 66 by 125 feet in size, with a one-story addition 55 by 125 feet. J. D. Lewis has charge of the repair department and has the distinction of having built one of the first automobiles in America.

The Mississippi Valley Automobile Co. was organized in 1899 by Harry Turner, Jr., with headquarters at 4359 Olive street. After making several changes in location, the concern moved to 3927-37 Olive street, the present home. The company now owns three buildings, with 50,000 square feet of floor space. The Pope-Toledo, Pope-Hartford, Knox, Oldsmobile, Columbia and Autocar are sold. Storing and repairing constitute the bulk of the business aside from the sales department. C. A. Marien has charge of the repair department. Garage has accommodations for 200 machines.

The W. W. Leathers Automobile Co., at 3914-18 Washington avenue, is the only concern in the city selling steam machines. It has the agency for the White steamer. The main building is 50 by 100 feet, with an



FRONT AND SIDE VIEW OF THE WESTERN AUTOMOBILE CO.'S GARAGE.

addition just completed 25 by 100 feet. This concern is one of the later ones in St. Louis, having been organized in November, 1903. W. W. Leathers is the salesman and H. D. Van Leunen has charge of the repairs. Garage accommodations for 60 machines.

The Western Automobile Co. is one of the more recent organizations, as well as one of the largest in the city. It was organized in January, 1904, by Messrs. M. L. Lambert and Sam Braden. The offices are located at the corner of Washington and Walton avenues. This building is 45 by 125 feet, and also contains the salesrooms and repair shops. The garage is located across the street at 618-620 Walton, 50 by 150 feet. This concern handles the Pierce, Peerless and Thomas machines. F. G. Turner, formerly with the Peerless Co., has charge of the repair department. Garage accommodates 75 machines.

The American Automobile Co., located at 4150-54 Olive street, is agent for the St. Louis and Overland machines. Repairing and storing are features. Messrs. S. M. Frank and V. Heinrich, incorporators. Garage accommodates 30 machines. Mr. Frank acts as salesman and Mr. Heinrich attends to the repairs.

The Northern Automobile Co. is located at 4105-07 Olive street. The Northern machine is sold. Garage accommodates 10 machines.

The Westminster Automobile Co. is a recent organization, located at No. 4390 Olive street. The National gasoline and National electric and the Eldridge are sold. Storing, repairing and renting. Garage accommodates 30 machines. D. W. Dean, manager.

The Morgan & Harding Automobile Co., located at 3964-70 Olive street, have just moved into their new quarters. Features, automobile repairs and sundries. Handle the Newmastic tire. Garage accommodates 200 machines. Building 86 by 145 feet, two stories. Business organized in 1898 and capitalized at \$10,000. Machines to be sold, not announced.

The A. L. Dyke Automobile Supply Co.

is located at the junction of Washington, Walton and Olive streets. The main building is 127 by 150 feet, and has just been completed at a cost of \$30,000. An addition, 60 by 115 feet, will be completed by the first of the year at an additional cost of \$20,000. With this addition, the building will be the "flatiron" building of St. Louis. The business was organized in 1899 by A. L. Dyke, but Robert and Roy Britton became the owners on August 30, 1904. The garage has accommodations for 50 machines at the present time, and will have room for 100 when the addition is completed. F. Miller has charge of the repairs. Aside from the supply department the company sells the Marion machine. Concern is capitalized at \$40,000, with the Messrs. Britton controlling the stock.

The Mound City Automobile Co., located at 3944-46 Olive, represents the Queen and Cameron machines. The company was incorporated in May, 1904, with a capital of \$10,000. Building 50 by 154 feet. J. A. Scott has charge of the repairs and acts as business manager. Garage accommodates 60 machines. A. M. Robertson, president.

The J. H. Neustadt Co., of 826-30 S. Eighteenth street, manufactures all parts for the assembling of automobiles. Jobbers of all kinds of engines, transmissions, wheels and tires and all general supplies pertaining to automobiles. Organized in 1900 in a little room on corner of Ninth and Clark streets. Present building 75 by 200 feet, two stories. Gives employment to seventy-five men in season. Any machine repaired.

The St. Louis Motor Car Co., of 1211-19 N. Vandeventer, is one of the oldest manufacturing concerns in the United States and the oldest in the west. This business was inaugurated at Nashville, Tenn., in 1895, and moved to St. Louis the following year. It has grown from a concern occupying one room 25 by 30 feet and employing three men to a large, modern automobile factory occupying a main building 100 by 120 feet and three stories high, and an addition 50 by 125 feet. The company makes the St. Louis machines in their entirety with the exception of the tires and lamps. The business is incorporated for \$50,000, but the investment is much larger. Jesse French, Sr., and son, Jesse, Jr., control the business. This was the third automobile company in the United States, the Haynes-Apperson and Winton preceding it.



ONE OF THE PIONEER AUTOMOBILE MANUFACTURERS IN THE UNITED STATES.

RULES FOR INTERNATIONAL AUTO-BOAT RACE.

The following rules for the British International Race for Motor Boats, otherwise known as the Harmsworth Cup race, for 1905, have been received from Basil H. Joy, secretary of the Automobile Club of Great Britain and Ireland. By an important change in Rule 6, the boats will be sent away with flying start and all competitors are to start together. Rule 4 alters the length of the course from between six and twelve nautical miles to between thirty and thirty-five nautical miles, so that a better type of boat will probably be evolved. Careful definitions of the course in Rule 4 are expected to eliminate sharp curves from the course. There have also been minor changes in Rules 5, 14 and 15.

RULES PURSUANT TO THE DEED OF GIFT.

1. **POSSESSION OF CUP OR TROPHY BY WINNER.**—The cup or trophy shall be handed to the club of the winning boat, and held by such club for one year or any other further period by the consent of the committee hereinafter mentioned, provided a succeeding competition shall not take place within one year, but if the said club are called upon by the trustees, then they shall forthwith return the same on demand at any time after the expiration of twelve months from the date of the race at which the same was won.

2. **CUSTODY OF CUP AND INSURANCE.**—On the said cup being handed over to the winning club, such club shall thereby become and be deemed to be the custodians of the said cup, and shall be deemed to undertake for the safe custody of the same, and shall also insure the same for £500, or such other sum or sums as the committee shall decide, and the insurance premium for that year shall be paid by the club holding the same. Such insurance shall not only cover loss by fire, but also any other loss or damage whatsoever.

3. **COURSES.**—The race shall be held over a suitable course in sheltered waters of the country holding the cup, or failing that in similar waters in Great Britain or Ireland.

4. **LENGTH OF COURSE.**—The length of the course shall not be less than 30 or more than 35 nautical miles, and shall be so arranged as to avoid any angle in the course of less than 120 deg., and there shall be a distance of at least 100 yards between any two marks. The length of each round shall not be less than 5 nautical miles.

5. **PLACE WHERE RACE TO BE HELD.**—The course shall be determined by the club holding the cup, and particulars thereof shall be sent to all clubs which have challenged, within twenty-eight days of the receipt of a challenge. In any case the course shall conform to Nos. 3 and 4 of these rules.

6. **STARTING LINE.**—The start shall be a flying start, and all competitors shall be started together by signal, five minutes after the preparatory signal. Both these signals shall consist of flag and sound signals. That boat of which any portion of the hull first crosses the finishing line shall be adjudged the winner of the race.

7. **MEASUREMENTS AND MODE OF STARTING.**—Measurements and starting of the competing vessels and the judging of the race shall be carried out under the direction of the International Commission defined by Condition 10 hereof, who also shall be the Racing Committee referred to in the Racing Rules of the Marine Motor Association for the purpose of considering protests.

8. **LIMITATION OF SIZE.**—The only limitation of the size of the competing vessels shall be in the overall length of the hull, which shall not exceed 40 feet.

9. **FLAGS TO BE CARRIED.**—Each boat shall carry a distinguishing flag, which may be of any material, and which shall not be less than 12 inches hoist nor 15 inches fly, and shall be carried at a height of not less than 2 feet clear of the deck.

10. **ENGINES AND MOTORS.**—There shall be no restriction on the number, size, or horsepower of the engines or motors, except that each boat taking part in any race shall contain and be fitted with

such mechanical power as will drive her astern at a rate of speed of not less than four knots an hour in still water.

11. **MINIMUM SPEED FOR QUALIFYING.**—If none of the competitors are able to complete the course at an average over the whole length thereof of 12 knots an hour from any cause whatsoever, then the race shall be abandoned for the day, and the same shall be run on a day to be agreed upon and fixed by the International Commission, but such day shall not be more than three days after the abandoned race. If only one of the competitors is then ready, that competitor shall go over the course and shall be adjudged the winner of the cup. If none of the said competitors are ready within the three days hereinbefore mentioned, the race shall be again postponed to a date to be decided by the International Commission, and if again no vessel is ready, the event shall be again postponed, and so on until one boat go over the course on one of the dates to be fixed as aforesaid by the International Commission, and such boat shall be deemed to be the winner of the cup.

12. **ACCIDENT TO COMPETING BOAT.**—In the event of any temporary accident to or derangement of any one of the competing vessels during the race, no assistance shall be rendered to the boat other than by the two hands carried by the said boat. If the accident or derangement is of such a nature that outside assistance shall be necessary, the distinguishing flag shall be hauled down and the vessel shall take no further part in the races. Outside assistance may not be given or rendered or procured until the distinguishing flag has been hauled down, but after the same has been hauled down assistance may be given, but the vessel shall be immediately removed from the course, and shall not interfere in any way with the other competitors.

13. **COMPETITOR NOT TO ASSIST IN ANY ACCIDENT BUT TO FINISH COURSE.**—In case of an accident to one of the competitors the other competitors shall continue the race and finish the course. In the event of one competitor going to the assistance of another the committee shall decide whether the race shall be run again.

14. **CHALLENGE.**—In the case of no challenge having been received by the club holding the cup on or before the 1st of February in any year, no race can take place for the cup during that year; and in no case shall a race take place within six months from the date of the receipt of a challenge; and the last date at which an entry may be received is July 1st in any year.

15. **ALTERATION OF COURSE.**—If in the opinion of the International Commission, constituted as provided in Condition 10 of the Deed of Gift, a postponement of the race or an alteration of the course shall be desirable, owing to unfavorable weather or any unforeseen cause, this commission shall have power to take such action as may be necessary; but in any case the course must conform to Nos. 3 and 4 of these rules.

16. **LIFEBUOYS.**—Each boat competing for the cup must carry two lifebuoys in a position ready for use.

RECOMMENDATION.—LIFE-SAVING APPARATUS.—It is recommended that each member taking part in the British International Cup Race should wear a life-jacket or make use of any other device or apparatus for life-saving in case of immersion.

The Missouri Automobile Works are located at 1621-23 S. Jefferson, and sells the Elmore, Crestmobile and Pope-Tribune. Business includes repairing, storing and renting. Garage accommodates 75 machines. Capitalized at \$10,000, fully paid up. Company is making arrangements to branch out and manufacture parts. Building 40 by 150 feet, two floors.

The Lemon Automobile and Manufacturing Co. is the style of the latest organized company in St. Louis. This company was incorporated the latter part of May with a capital stock of \$100,000. It manufactures one style of machine known as the Meteor surrey. The factory is located at 3419 Lindell boulevard, and the offices are in the new Frisco building. The Meteor is built on the style of buckboards, having two seats instead of one.

The O. L. Collins Automobile Co., with offices at 1314 Chemical building, is agent for the Glide machine, manufactured at Peoria, Ill.

The Macnish Automobile Co. has recently moved into the new quarters at 3667-69 Olive, among the largest in the city. The building is 50 by 110 feet, three floors. The company is a close corporation, capitalized at \$10,000, with F. J. and J. Macnish controlling the stock. Agents for the Haynes-Apperson and Courier machines. Garage accommodates 100. One of the features of this garage is that the machines have ample room to turn on coming out, without crossing the street car tracks.

Besides the companies mentioned, there are a great many private agents in the city for various automobiles, but as these have no regular headquarters, it is impos-

sible to find what other machines are sold. The Ford has been represented here at different times, but the agency changes so often that nothing definite can be learned.

The automobile livery industry is a new one, at this time only two concerns in the city doing a strictly automobile livery business. These are the Auto Livery Co., of 3944 Olive street, and the Keyes-Marshall Bros. Auto Livery Co., of 1122 St. Charles street. The former uses Wintons, Packards, St. Louis and Royal touring cars, while the latter use Cadillacs, Panhards and other French machines.

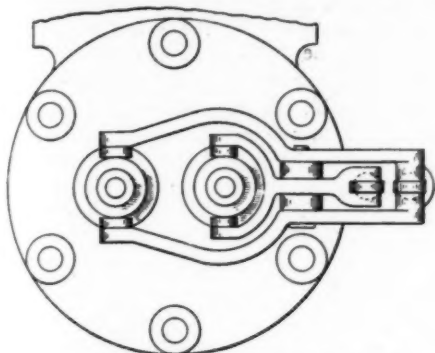
Police Commissioner McAdoo, of New York city, has issued instructions to all his police stations that the amount of bail required in cases of automobile speeding shall not exceed \$100.

Patents

Valve Mechanism.

No. 771,095.—E. C. Richard, of Detroit, Michigan.

This invention consists mainly in the forked type of levers used to operate valves



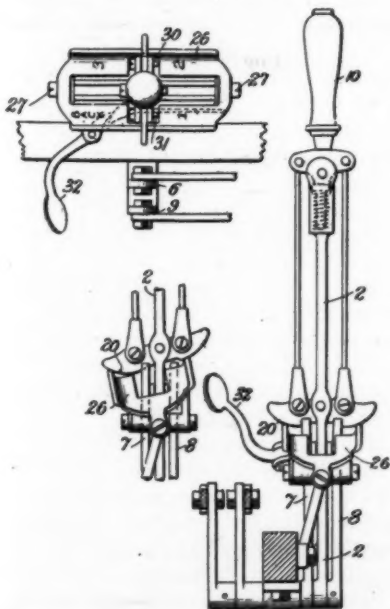
RICHARD VALVE-OPERATING LEVERS.

located in the cylinder heads, one lever straddling the other, as shown. The valve stems have flanged caps inside of which the valve springs are located, and the levers have anti-friction rollers at their ends, which bear on the flanges of these caps and on the push rods rising from the cams.

Speed Changing Lever.

No. 770,251.—J. L. Fitzgerald, of Newport, R. I.

A pick-up device for operating four-gear changes by one lever without passing through the intermediate speeds in going from high to low. The lever 2 is pivoted at its base to move freely fore and aft, and it carries a handle 10 pivoted to rock from



FITZGERALD SPEED-CHANGE LEVERS.

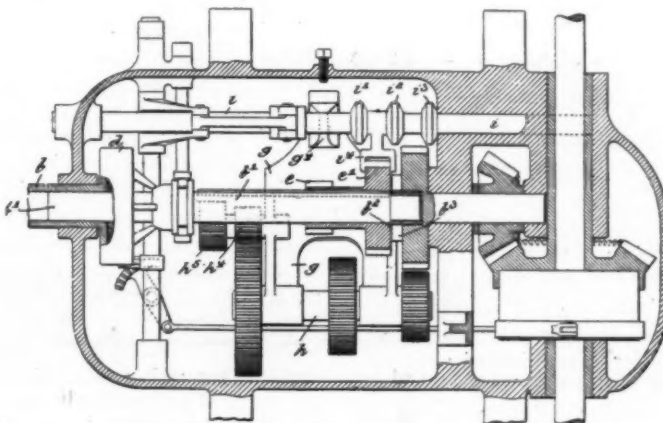
side to side, a spring (dotted) at the base of the handle tending to keep it vertical. When thus rocked it rocks the cam piece

20 21, as seen in the detail. This cam piece normally engages notches in the tops of levers 7 and 8, connected to the gear mechanism, but when rocked it disconnects from one of them. It also acts on the segmental locking plate 26, which is pivoted at its ends by screws 27, and which has central recesses 30 31, which normally engage and lock 7 and 8. In the neutral position, therefore, as shown in the full rear view, no movement of 7 and 8 is possible. When 10 is rocked, however, 26 is rocked also by the cam piece, so that one lever, as 7, is free to move in the long central slot in 26, this also being the lever still engaged by the cam piece. The other, as 8, is both released by 20 and locked by 26, so that it remains stationary while the fore-and-aft movement is performed, which engages the gears. Pedal 32 actuates a supplementary lock, which prevents engagement of the reverse till it is pressed.

Speed Changing Gears.

No. 770,820.—T. B. Rennell, of Denver, Colo.

A mechanism by means of which the gears are shifted and at the same time are caused to mesh at the tips of the teeth, as



RENNELL SLIDING GEAR CHANGE-SPEED MECHANISM.

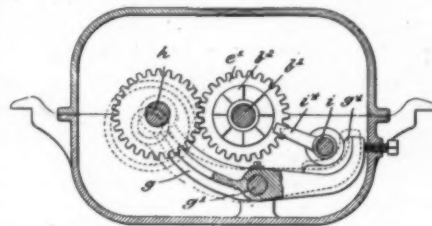
in the Renault machine, instead of at the ends, as ordinarily. In the plan section, *b* is the driving shaft, *d* a clutch answering to the usual flywheel clutch, and *b1* the first gear shaft, on which pinions *e* and *e1* slide. The direct drive is obtained by the claw clutch *b2 b3* in the position shown. In this position none of the change gears are in mesh. The jackshaft *h* is carried in bearings in a wide ribbed casting *g*, pivoted at *g1* to rock, so as to engage or disengage the gears at the tips of the teeth. A spring (not shown) holds it normally in the disengaged position, as shown by dotted lines in the vertical section. It is brought to the active position by any one of the coned disks, *i1, i2, i3* on the shifter rod *i*, these disks acting on a raised or cam portion *g4* on *g*. The pinions are shifted by *i4*, and when they are nearly in the working positions, the complementary gears are brought into mesh with them by the cam

action described. The third position is for the reverse, through pinions *h4, h5*.

Control Mechanism.

No. 768,148.—T. B. Rennell, of Denver, Colo.

A combination of levers operated by the hand lever at the side, so arranged that fore-and-aft movement of the hand lever shifts and meshes the gears described in



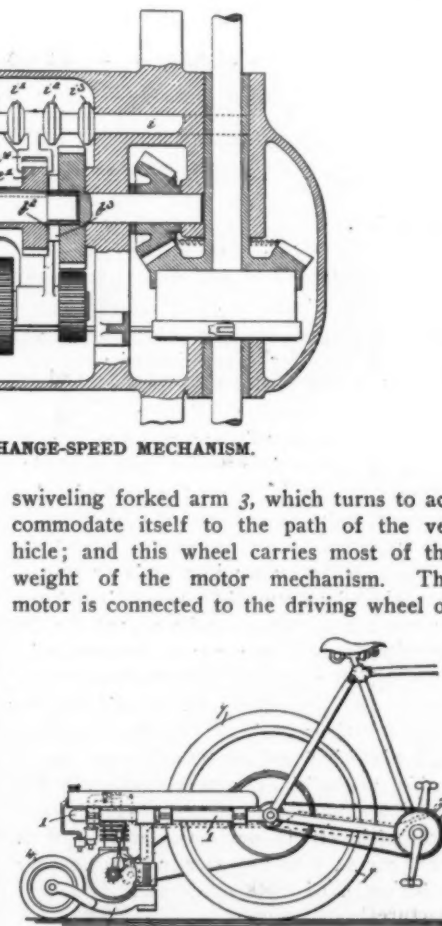
VERTICAL SECTION OF RENNELL GEAR.

No. 770,820, and right-and-left oscillation movement of the same lever effects engagement or release of the clutch.

Detachable Driving Mechanism

No. 770,936.—W. S. Simpson, of London, Eng.

A detachable frame 1, carrying a motor and tank, with the necessary accessories. A rear trailer wheel 4 is carried by a



SIMPSON BICYCLE-DRIVING TRAILER.

wheels 7 by a chain or belt. According to the inventor, this device may be applied to any sort of light vehicle.

THE AUTOMOBILE

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Track Racing in America.

Apparently the Vanderbilt road race has had the effect of greatly stimulating public interest in automobilism. Enquiries for cars from unexpected sources have been numerous in the metropolitan district of New York since the race, and a wider expression of public interest is found in the very large attendance at the track races at Brighton Beach last Saturday. With this increasing public interest in automobile racing comes an increased responsibility on the part of those charged with the conduct of such races in any capacity.

There is no reason in morals or sportsmanship why automobile races should not be conducted with as strict regard for the proprieties as horse races, for example. This applies more especially to track races. Road races, endurance trials and the like have for their real purpose the technical trial of design and construction under scientific methods of observation, and the sporting side of such contests is really only incidental. It is quite the reverse with track races; they are sporting events pure and simple, of little practical and no scientific value.

If a machine breaks down in a track race or fails by reason of faulty construction it is simply not among the winners. The reason for its failure is not recorded by the race management, and the performances of

any but the winners are not even announced. No scientific record of excellence of performance is kept.

The track race provides an afternoon's sport for the public at so much a head. Its chief purpose is to make money for the management, and in this important respect it has nothing in common with the serious trials of cars, which are usually a source of considerable expense to the promoters, and are invariably conducted without charge to the spectators. When a man has paid an admission fee to witness a race he has certainly acquired a proprietary right; a right to have the race conducted as represented and with strict adherence to the written and unwritten rules of good sportsmanship.

This was certainly not the experience of those who attend the Brighton Beach meeting. Several cars advertised to be driven in competition did not put in an appearance, and in two races the most widely advertised driver, Barney Oldfield, "laid down," in sporting parlance, when passed by another driver. This last offense corresponds exactly to that detestable practice in horse racing known as "pulling" a horse, a charge which, if proven, would cause any jockey club of repute, the world over, to rule the offender off the track.

For failure to start and for misconduct of drivers in races the management cannot be blamed, when, as in the case at Brighton Beach, it has booked the entries in good faith. It is distinctly up to the Racing Board of the American Automobile Association to stop these practices. This organization is the jockey club of automobilism in this country, and it cannot shirk its responsibilities without such a loss of prestige as will inevitably lead to the passing out of its hands of racing control into those of some more courageous body. Entries for self-advertisement are not only unsportsmanlike, but unfair to a public which pays the required price of admission.

Another unpleasant feature of Saturday's races, for which it is not clear that the race promoters are free of responsibility, was the petty "graft" in the nature of a charge of 50 cents for each car that entered the enclosure. This was nominally in return for a "Buggy and Carriage Check," but was actually a "holdup," as no services worth any monetary consideration were given in return by the track proprietors.

Let us have clean, high-class racing or none at all.

Information About Customers.

It is essential that an automobile dealer obtain information of the means and standing of those who desire credit of him. This is no easy task, and many people seem to have given it up in despair. Some, having no faith in human testimony, will sell to no one on credit whom they have not known from long personal acquaintance. Others take the opposite course, sell to all applicants alike, trust-

ing to Providence for a safe deliverance from all their fears. One frequently possible source of information is any similar establishment with which the customer has had dealings. This information, of course, may be defective, but it is usually better than none, and the ordinary courtesies of trade should lead to an impartial and prompt report from one dealer to another.

Other sources of information are from parties not in the trade, but known to the dealer, who live in the same locality as the applicant. The professed object of the mercantile agencies is to collect reliable data relative to the home standing and character of the men engaged in all lines of business throughout the country, and to embody it in reports for the convenience of those who are willing to pay for it. If this system could be infallible—or, in other words, if all the correspondents of these agencies were omniscient men, above all favor and prejudice,—it would be as perfect as anything could be. But, unfortunately, this cannot be; their reports are not infallible, as satisfactory evidence has repeatedly demonstrated, hence the necessity for independent investigation.

The main source of information is to see the man and listen to his own statements. This, like all other means of investigation, will sometimes fail, but generally the appearance and manner of a man will show his character. A man who is not worth a dollar in visible property is frequently more worthy of credit than another who has visible assets of thousands. Losses very often occur in trusting to property and reports and not to men. "If you have a doubt whether a customer be honest or tricky, speculative or prudent," says an old banker to his fellow-bankers, "be guided by the impressions of the first interview. In nine cases out of ten these impressions will be found to be correct."

It is a good plan also to expect that strangers desiring credit shall be introduced by some person to whom they are personally known, in which case the character and reputation of the introducer should not be overlooked in making judgment of his friend. Where the reference is good and the impression of the first interview favorable, it would be an excellent custom to have what might be called an "Information Book," in which to jot down notes of the statements made at these times. The data collected in this manner is more accurate, in a majority of cases, than the report of any outside party.

Of course, the smaller the business, and the more locally confined, the easier this plan is to follow. Were it a general rule to require satisfactory advance information, it would be accepted as a matter of course, though some would no doubt be disposed to "skulk" definite statements. It would possibly improve the credit system to repeal all laws for the collection of debts (a plan advocated by a great many persons) and increase the penalties for false representation.

**Liability
to
Damages.**

When automobilizing on the highway the driver of a car should not forget that, quite aside from any local or State speed laws he is called upon to observe, there are legal obligations imposed upon him in common with all other road users. In a general way it may be said that speed laws regulate the management of the car as a unit and apply equally in a crowded street or a lonely country road, while other provisions of law apply to the management of a car in its relation to other road users. This point, which we have referred to on occasion, is very often forgotten by drivers, and seems to have been lost sight of altogether by the defendant in a recent damage suit in New York State. Substantial damages against the driver of a car were awarded by the jury in the fourth judicial district in New York, before Justice Spencer, who held that reckless disregard of the proper use of a public highway and the rights of those entitled to use it in a proper manner was sufficient ground for recovery for wilful assault.

The parties to the suit were Charles D. Clement, a farmer of the town of Saratoga Springs, and Milton C. Hastings, chauffeur for Edward D. Murphy, Jr., son of former Senator Murphy of Troy, N. Y. The accident happened at Saratoga Springs on July 11 last on Union avenue.

On the trial the evidence showed that Clement was driving to his home when Hastings came up behind his carriage and, colliding with the rear wheel, overturned the vehicle, throwing the plaintiff heavily to the ground. His injuries were slight, but his carriage was wrecked. Hastings and three companions were out for a ride and testified that on approaching the carriage the chauffeur gave warning of his approach, expecting the driver would turn to one side. They were going at a rate of speed that prevented clearing the wagon when the driver did not turn out. Clement testified that he was deaf and did not hear the signals nor the approach of the automobile from the rear. Attempts were made on the trial to prove that Clement could have heard the warning signals and tests were made, but without success.

Justice Spencer charged the jury that at the time of the collision the plaintiff was entitled to the use of the highway; that if defendant was driving in a reckless and wanton manner, and indifferent to the consequences, it constituted wilfulness, and the plaintiff was entitled to recover. The jury returned a verdict of \$600 damages.

Italy's entry for the 1905 Gordon Bennett race for 1905 has already been forwarded to the Automobile Club of France. Three firms have notified the Automobile Club of Turin of their intention of entering Fiat, Rapid and Italia cars in the elimination trials. The Napier team has already been appointed by S. F. Edge, and will consist of Cecil Edge, J. W. Stocks and A. MacDonald. Mr. Edge himself has no intention of driving in the event.

**EUROPEAN RACING
CIRCUIT IS PROPOSED.**

Italian Sportsman Suggests Grouping Leading Contests in Six-Weeks Program Beginning in Paris and Ending at Palermo, Italy.—Motorcycle and Auto-Boat News.

Special Correspondence.

PARIS, Oct. 14.—The latest in automobile races is the *Circuit Latin*. A rich Italian sportsman, the Chevalier Vincenzo Florio, has brought forward a scheme to group together five existing contests, and to create a sixth, so arranging them that instead of being six opposing meetings they shall form parts of one great contest. The races are: 1—The Mount Ventoux race; 2—The Mount Cenis race; 3—The Brescia contest; 4—The Kilometre at Podone; 5—The Consuma race; 6—The Palermo race.

The prizes for these different races amount to about 20,000 francs (\$4,000) which, together with the 10,000 francs to be gained for tires, would amount to 30,000 francs (\$6,000) for the car winning the entire series. The dates of the meetings would be so arranged that all the cars could travel by road. Starting from Paris they would go to Avignon, then to Mount Cenis, Brescia, Padone, Florence, and finally to Palermo. For the return to France, Chevalier Florio, who is also one of the directors of an important Italian steamship company, offers to transport gratuitously to France, on one of his company's vessels, all the automobiles taking part in the Palermo race.

The circuit would afford about three weeks of good sport, say from the end of August to the middle of September, and would not incur very much expense on the part of automobile builders. While the intention is to create a contest extending over the six meetings, local entries would also be accepted from those only wishing to run in one race.

100-KILOMETER MOTORCYCLE TEST.

The "third of a litre test," the finals of which were run at the Parc des Princes, Paris, on October 9, while not affording anything new in the way of record breaking, was interesting as a test of the capabilities of motorcycles. The event was limited to motorcycles with cylinders of one-third of a litre capacity, and after a week's preliminary races, twelve machines were brought together for the final. The remarkably even running of the motors is shown by the fact that all twelve competitors finished the race, there being a difference of only twenty minutes between the first and last. The race, 100 kilometers, was won by Anzani in a belt-driven Alcyon motorcycle, his time being 1:18:37 1-5. The record for the hour was 77 kilometers 900 meters. The last cycle finished in 1:41:58.

If permission can be obtained, next year's race will probably be on the road, and will be over a distance of at least 300 kilometers. By this means an even more practical test of the powers of motorcycles will be obtained.

SEINE AUTO-BOAT RACE MEDALS.

The motor boat race in connection with the Salon d'Automobile, held annually in Paris during the month of December, promises to be a great success. Starting from the Alexandre III. bridge, in the center of the city, and within two minutes of the Grand Palais, in which the automobile show is held, it will be sure to draw together a large number of spectators. Gold medals have been offered by nearly all the Parisian newspapers of importance. The following classes have been organized:

The *Gaulois* medal for cruisers up to 6 1-2 meters, *Press* medal for cruisers of 6 1-2 to 8 meters, *Yachting Gazette* medal for cruisers of 8 to 12 meters, *L'Echo de Paris* medal for cruisers of 12 to 18 meters, *Matin* medal for racers up to 8 meters, *Figaro* medal for racers from 8 to 12 meters.

Extra classes: *La France Automobile* medal for motors up to 8 horsepower, *Eclair* medal for motors from 8 to 12 horsepower, *Petit Journal* medal for motors from 12 to 24 horsepower, and *Journal des Débats* medal for motors above 24 horsepower.

RACE AROUND FRENCH COAST.

The auto-boat race now being organized by *Le Journal* is not lacking in originality. Known as *Le Tour de France*, the race will start from some port on the northeast coast of France and will continue by stages down the channel and along the west coast of France to Bordeaux. By means of the Garonne and the two canals, the Mediterranean will be reached, and the race will finish at Toulon.

The scheme is daring, for a tour round the coast of France, even in good weather, is no small affair for a motor-boat. The difficulties of organization, too, are great, and all details need to be carefully studied if the event is to be of any practical value.

LAW UNCONSTITUTIONAL.

Illinois Judge Holds Six-Mile Limit is Unreasonable and Discriminates.

Special Correspondence.

STERLING, Ill., Oct. 24.—Judge O. E. Heard, of the Lee County Circuit Court, handed down an important decision on an ordinance recently passed by the city council of Dixon limiting the speed of automobiles to six miles an hour. The judge held that the law was unconstitutional, ruling that cities could not govern the speed of automobiles.

Several months ago the city council of Dixon passed an ordinance regulating the use of autos within the city limits, and fixed the maximum speed at six miles an hour. Automobile owners took offense at the ordinance and, after consulting attorneys, decided to test it. Egbert R. Kent was arrested on the charge of violating the regulation and was given a trial before the police court. He pleaded guilty to the charge and was fined \$20. He appealed the case to the Lee County Circuit Court.

Judge Heard, in his decision, says:

"The ordinance limiting the rate of speed of autos to six miles an hour is unreasonable and void because it is oppressive; said ordinance unduly discriminates against autos and is void; said ordinance is void, because while in some portions of the business district of the city of Dixon the rate of speed might be limited to six or eight miles per hour and be reasonable, yet in other portions of the city the speed limit of six miles an hour is unreasonable, oppressive and tends to create a monopoly in favor of means of travel not included in the ordinance or expressly excepted from its operation."

The Boston Automobile and Power Boat Show for 1905 will be held in the Mechanics Building, Boston, Mass., March 13 to 18 inclusive. The exhibition will be under the auspices of the Boston Automobile Dealers' Association, incorporated. Space diagrams have been issued; these and other information may be obtained from Chester I. Campbell, Manager, 5 Park Square, Boston, to whom all communications should be addressed.

NEW WORLD'S RECORD.

Kiser and Gorndt Put Up New Figures from Sixteen to Fifty Miles.

Special Correspondence.

CLEVELAND, Oct. 24.—As the result of the record-breaking trials held on the Glenville track last Wednesday afternoon, all world's track records from ten to fifty miles, and the one mile record, are now held by Winton cars. To vindicate the two *Bullets*, which failed to show satisfactorily in the races the previous Saturday, arrangements were made to send both cars after all world's records, with A. A. A. sanction. The trials constituted the entire program of a free matinee given under the auspices of the Cleveland Automobile Club. About 3,000 spectators took advantage of the opportunity for a free show.

Charles Gorndt, with the four-cylinder Gordon Bennett racer of 1903—*Bullet No. 3*—was sent after the 50-mile record made by H. S. Harkness with the Mercedes at Asbury Park last August. It was 2 p.m. when Gorndt was sent away with a flying start. He seemed to have trouble with his machine during the first part of the trial, his time for the eighth mile, which was his slowest, being 1:17 1-5. The eleventh mile was almost as slow, and then he began to improve gradually until the twenty-ninth mile, when he reached a maximum speed of 1:02 4-5 seconds for the mile. From the thirty-sixth mile his speed gradually decreased, and from that on his work was erratic. When he began to get inside the records at twenty-one miles he was given a round of applause. Mr. Winton signalled to Gorndt that he was doing well and Gorndt waved his acknowledgment.

Some of the officials wanted him to go on and break the sixty and seventy-five mile records, but Mr. Winton feared that the tires were in danger. When Gorndt stopped in front of the grandstand almost the first to greet him was his wife, followed by his enthusiastic brothers and sisters.

Much to the surprise of everyone, it was found that the tires on the car were hardly warm and apparently were in as good condition as when they were put on.

Kiser with *Bullet No. 2* was then started for the twenty-five-mile record. The magneto sparking apparatus which had given trouble the week before had been removed and the old dry batteries had been put on for the trial. With a flying start, the first mile was made in 58 seconds, two miles in 1:55 2-5, three in 2:53 2-5 and four in 3:52 4-5. At this rate he was a long way from the records for the lower marks and he was stopped. It was found that one of the wires leading to a spark plug had been grounded. After this had been remedied the car gradually increased its speed. At fifteen miles Kiser was only three seconds from Oldfield's record, and at sixteen miles he was more than twenty seconds inside of Sartori's record made at Empire City track. At twenty miles he was twenty-nine seconds ahead of Sartori's record, and after that he began cutting down the figures which Gorndt had just made with the smaller car. Kiser's twenty-first mile was made in 56 seconds, the fastest of the day. His time for the twenty-five miles was almost five minutes faster than Harkness's record. A lower record than that of Harkness is claimed, however, by Oldfield, who made twenty-five miles at Buffalo in the *Green Dragon* in 26:42. This was beaten by Kiser, but was not equalled by Gorndt.

Oldfield was present and watched the work with interest. He was asked to bring the *Green Dragon* out for a trial, but the car was being overhauled preparatory to being shipped East. L. P. Mooers, of the Peerless Company, was asked if Oldfield would be sent after the new records, and he stated that Oldfield would go after all records up to 100 miles in the near future.

Not a little credit for the work of the *Bullet* was due to Charles W. Mears, editor of the Winton house organ, who arranged a schedule and signal code to keep the drivers informed what they were doing.

The new records are as follows:

NEW WORLD'S RECORDS MADE BY KISER AND GORNDT, OCTOBER 19.

Miles.	Times.	Holder.	Previous Record.	Made by.	Car.	Place.	Date.
16	15:20 2-5	Kiser	15:41 2-5	Sartori	Mercedes	Yonkers	July 18, '04
17	16:17	"	16:39 4-5	"	"	"	" " "
18	17:14	"	17:38 4-5	"	"	"	" " "
19	18:11	"	18:37 1-5	"	"	"	" " "
20	19:08 2-5	"	19:37 1-5	"	"	"	" " "
21	20:04 2-5	"	23:47	Gorndt	Winton	Glenville	Oct. 19, "
22	21:01 2-5	"	24:52 2-5	"	"	"	" " "
23	21:59 3-5	"	25:56	"	"	"	" " "
24	22:58	"	26:59 3-5	"	"	"	" " "
25	23:59	"	28:03 2-5	"	"	"	" " "
26	29:07 1-5	Gorndt		Harkness	Mercedes	Long Branch	Aug. 18, "
27	30:11	"		"	"	"	" " "
28	31:14 3-5	"		"	"	"	" " "
29	32:17 2-5	"		"	"	"	" " "
30	33:20 4-5	"	34:09 1-5	"	"	"	" " "
31	34:25	"		"	"	"	" " "
32	35:29 4-5	"		"	"	"	" " "
33	36:35 3-5	"		"	"	"	" " "
34	37:41	"		"	"	"	" " "
35	38:46 3-5	"	39:51 1-5	"	"	"	" " "
36	39:53	"		"	"	"	" " "
37	41:00 2-5	"		"	"	"	" " "
38	42:08 2-5	"		"	"	"	" " "
39	43:14 4-5	"		"	"	"	" " "
40	44:20 2-5	"	45:30 2-5	"	"	"	" " "
41	45:26	"		"	"	"	" " "
42	46:32	"		"	"	"	" " "
43	47:39 4-5	"		"	"	"	" " "
44	48:47	"		"	"	"	" " "
45	49:55 3-5	"	51:08 4-5	"	"	"	" " "
46	51:04	"		"	"	"	" " "
47	52:13	"		"	"	"	" " "
48	53:22 1-5	"		"	"	"	" " "
49	54:32 2-5	"		"	"	"	" " "
50	55:42	"	1:01:23 1-5	"	"	"	" " "

GRADE CROSSING SUIT.

E. B. Cornwall Asks Damages from R. W. & O. R. R. for Rochester Accident.

Special Correspondence.

ROCHESTER, Oct. 24.—The halftone which appeared on page 475 of last week's *AUTOMOBILE*, showing the wreck of Edward B. Cornwall's Winton touring car that had been struck by a locomotive on the Rome, Watertown & Ogdensburg Railroad, is from one of a set of photographs that is being used as evidence in a suit brought by Mr. Cornwall against the railroad company for damages.

This is probably the first time in the history of automobiling that the damaged party has brought suit against the railroad for a grade crossing accident, and if Mr. Cornwall can convince the jury that what he says is the truth he seems to stand an excellent chance of recovering the full amount sued for—\$25,426.70.

As the picture of the wrecked machine plainly shows, the automobile was completely demolished, being carried on the pilot of the locomotive a distance of 200 feet. The clothing of both Mr. Cornwall and his aged mother, who accompanied him, were ruined. Mrs. Cornwall lost a diamond valued at \$40, a pair of eyeglasses valued at \$9 and a pair of gloves valued at \$2. All of these items are included in the suit, as well as a big doctor's bill for each patient, hospital charges, and money compensation for receiving injuries from which entire recovery is impossible.

Summons and complaint in both suits were filed Saturday with the Monroe County Clerk. Negligence on the part of the flagman at the crossing and the excessive speed of the train are alleged by the plaintiffs to have been responsible for the accident. John Van Voorhis & Sons are the attorneys for the Cornwalls.

Cornwall's complaint alleges that he was driving his automobile carefully and cautiously in an easterly direction along Clifford street, and on nearing the tracks brought the machine to a stop to ascertain if it were safe to cross. Cornwall asserts that a flagman was stationed at the crossing, and that after he had brought the automobile to a stop the flagman signaled to him to cross.

Cornwall started the machine and was almost on the tracks when he discovered the approaching train, which, he alleges, was going at an illegal rate of speed. He tried to stop, but it was too late. The engine crashed into them and carried the machine and occupants 200 feet down the track before it could stop. Both occupants were rendered unconscious. Mr. Cornwall received a broken collar bone, a fractured left shoulder, a number of severe scalp wounds, had his forehead torn open, his right leg below the knee skinned and bruised, his left leg and left wrist sprained and will always be deprived of the free use of his left arm and shoulder, he declares.

Mrs. Cornwall had two ribs fractured, her collar bone broken, her right shoulder dislocated, her right thigh severely cut, left arm bruised, wrist and ankle sprained and suffered a general muscular strain and concussion of the brain. The doctors say she will never fully recover from the shock to her nervous system or have the free use of her arms again.

Both allege that the crossing is a most dangerous one, that the flagman was incompetent, that the train was running at an unlawful speed and that it gave no warning by either bell or whistle.

AMERICAN AND FOREIGN AUTOMOBILE AND AUTO-BOAT FIXTURES.

- Oct. 29.—Special Race at Empire City Track, Yonkers.
 Oct. 29.—Auto-Boat Race, New York to Poughkeepsie, Hudson River.
 Oct. 30.—Gaillon Hill Climb, France. *L'Auto*.
 Nov. 20.—100-Kilometer Trials. A. C. of Algeria.
 Nov. 24.—Hill Climbing Contest, Eagle Rock Hill, Orange, N. J. W. J. Morgan and New Jersey A. & M. C.
 Dec. 9-25.—French Automobile Salon. Paris.
 Dec. 26-Jan. 2.—Reliability Trials. Motor Union of Western India.
 Jan. 11-24.—First Annual Importers' Automobile Salon, [Herald Square Hall, New York].
 Jan. 12-21.—Fifth Annual Automobile Show, Madison Square Garden, New York. N. A. A. M., Madison Square Garden Co. and A. C. A.
 Jan. 14-24.—Fourth Annual Automobile Show at Brussels, Belgium.
 Jan. 23-28.—Philadelphia Annual Automobile Show. A. C. of Philadelphia and Auto. Dealers' Assn. of Phila.
 Jan. 27-Feb. 4.—Fourth Annual Automobile Show, Crystal Palace, London.
 Feb. 4-11.—Fifth Annual Automobile Exhibition, Chicago. Coliseum Building. N. A. A. M. and C. A. C.
 Feb. 4-19.—Automobile Exhibition at Berlin, Germany.
 Feb. 5-19.—Automobile Week, Nice, France.
 Feb. 10-18.—Automobile Exhibition, London, England. Society of Motor Manufacturers and Traders.
 Feb. 13-18.—Fourth Annual Exhibition at Detroit. Tri-State Automobile and Sporting Goods Association.
 Feb. 21-March 9.—National Motor Boat Show, Madison Square Garden, New York. Nat. Assn. Engine and Boat Mfrs.
 Feb. 27-March 4.—Cleveland Automobile Show. Cleveland Automobile Club.
 Feb. 27-March 4.—Automobile Exhibition, Toronto Canada.
 March 3-11.—Motorcycle Show, Liverpool, England.
 March 6-11.—Third Annual Buffalo Automobile Show, Convention Hall, Buffalo. Buffalo Automobile Trade Assn. and Buffalo A. C.
 March 4-18.—Fourth Annual Automobile Show, Boston. Boston Automobile Dealers' Assn.
 March 27-April 5.—Fifth Annual Washington Automobile Show. Washington Auto. Dealers' Assn.
 April 1.—Light Van Trials. A. C. of Great Britain.
 April 2-16.—Monaco Motor Boat Fortnight.
 June 26.—Mont Cenis Hill Climb.

EAGLE ROCK HILL CLIMB.

Many Entries Presage Unusually Good Sport on Thanksgiving Day.

The Eagle Rock Hill Climb will be held on November 24, as usual, and the classification list just issued by the Automobile Club of New Jersey is so comprehensive that a full entry list should result.

Several entries were received early this week, even before the entry blanks had been officially sent out. William K. Vanderbilt, Jr., entered his new 90-horsepower Mercedes, which he will drive himself; William Wallace will drive his 90-horsepower F.I.A.T.; Paul Sartori will drive A. G. Vanderbilt's 90-horsepower F.I.A.T.; and E. T. Birdsall has entered a 40-horsepower Decauville, which will be driven by Guy Vaughn. Among those who have expressed the intention of entering are E. R. Thomas, 60-horsepower Mercedes; H. L. Bowden, 60-horsepower Mercedes; ex-Jockey Tod Sloan, 40-horsepower Decauville; F. A. La Roche, 80-horsepower Darracq racer, a new car that is now on its way to this country; James L. Breese, 60-horsepower Mercedes; Leon Thery, 80-horsepower Richard-Brasier; W. Gould Brokaw, 60-horsepower Renault. These are all in the racing classes.

The classes are as follows:

- Event 1.—Electric stock cars.
- Event 2.—Steam stock cars.
- Event 3.—Gasoline stock cars selling for \$850 and under.
- Event 4.—Gasoline stock cars selling for \$850 to \$1,250.
- Event 5.—Gasoline stock cars selling for \$1,250 to \$2,000.
- Event 6.—Gasoline stock cars selling for \$2,000 to \$3,000.
- Event 7.—Gasoline stock cars selling for \$3,000 to \$5,000.
- Event 8.—Gasoline stock cars selling for over \$5,000.
- Event 9.—Class A, 1,432 to 2,204 pounds.
- Event 10.—Class B, 851 to 1,432 pounds.
- Event 11.—Class C, 551 to 851 pounds.

Stock cars must be equipped according to catalogue specifications. In events 2 and 4, however, tonneaus may be removed; two persons must occupy each car. Each car competing in events 5, 6 and 7 must carry a tonneau and four persons. Cars in event No. 8 may be stripped. Entries will be received by C. H. Gillette, 31 West Forty-second Street, New York, the entry fee being \$5. Foreign cars must be entered at their selling price in the United States.

"The list of stock car entries will be something fierce," said C. H. Gillette. "I wouldn't be surprised if we had, all told, sixty cars on the hill on Thanksgiving

Day. The best time ever made on the hill was made last year by W. K. Vanderbilt, Jr., in a 60-horsepower Mors. His time was 1 minute 36 3-4 seconds. But those big 90-horsepower cars will go up the hill as if they were on the level, and the car that makes the best time will be the car that makes the best turns. The turns are downright bad at high speed. The record will be lowered to 1 minute 30 seconds easily."

Harlan W. Whipple will drive a White steam car in the stock car classes, Joseph Tracy will drive a Royal Tourist, and C. H. Gillette will pilot a Pope-Hartford. The timing will be done with the McMurtry electric timing apparatus, which will be in the capable hands of Mr. McMurtry himself. The stock cars will probably be sent up at 3-minute intervals; but the racers will go one at a time. The referees will be A. R. Pardington, who will officiate at the start, and S. A. Miles, who will welcome the competitors at the finish. Secretary Butler, of the A. C. A., will be one of the timekeepers. The other timekeepers, the clerks of the course and the judges have not yet been appointed. A technical committee of three will be appointed to inspect all machines to see that the rules of the contest are complied with in every way.

For the information of those who are not familiar with the Eagle Rock Hill, it may be said that it is exactly a mile long from the beginning of the grade to the commencement of level road at the top. The grade runs all the way up to 17 per cent, though this figure is touched only at one point and for a very short distance. In general, the grade is from 8 to 12 per cent, and the road is a fairly good one. What makes the hill very difficult, however, is its sinuosity, two turns in particular being very sharp. In fact, one is somewhat sharper than a right angle, and is on the steepest part of the hill near the top.

When a car has climbed the hill it will not be permitted to return the way it came, but must keep to the left and return to the starting point by a roundabout way, the distance being between two and three miles.

The winners will be awarded banners and certificates, and President Farrington, of the Automobile Club of New Jersey, will put up a trophy for the car making the fastest time of the day.

BOSTON DEALERS BECOME SOCIABLE.

Special Correspondence.

BOSTON, Oct. 27.—The first outing of the members of the Boston Automobile Dealers' Association was held last Friday. Rain came down in torrents during the afternoon, and the wind blew a gale, but the men in the trade are used to all conditions, so the

rain and wind did not prevent them from having a most enjoyable trip over the roads to Fern Croft Inn at Danvers, where dinner was served. Afterward the motorists drove back to Boston.

This outing was a result of a suggestion at a recent meeting of the association, that the members ought to infuse a little more sociability into their gatherings. They have gathered for business purposes time and again, and now it is proposed that they get together once in a while for a pleasant time, with shop talk barred. Among those on the outing were J. H. MacAlman of the Locomobile agency; A. E. Morrison of the Peerless; Harry Fosdick of the Winton; E. A. Gilmore of the Rambler; J. Hathaway of the White; Charles E. Fay of the Winton; A. R. Bangs of the Franklin, and many other agents and dealers.

RECENT INCORPORATIONS.

Automobile Supply Mfg. Co., Brooklyn, N. Y.; capital, \$15,000. Directors, Salvatore Salvino, New York; Errico Pascucci, and Louis Rubes, Brooklyn.

Aquamobile Company, Oakland, Cal.; capital, \$250,000; to deal in steam, gas, electric, gasoline and other motors. Incorporators, James D. McFarland, of Fruitvale, and others.

Berkshire Automobile Co., Springfield, Mass.; capital, \$15,000; to manufacture automobiles. Incorporators, Dr. William J. Mercer, Frank V. Wyland, F. A. Cooley and Clarence P. Hollister.

Zent Automobile Mfg. Co., Bellefontaine, O.; capital, \$25,000.

Neal, Clark & Neal Co., Buffalo, N. Y.; capital, \$7,500; to deal in automobile and bicycle sundries. Incorporators, Olin L. Neal, Harry B. Clark and Benjamin E. Neal.

Electric City Motor Co., Lynn, Mass.; capital, \$25,000. Incorporators, Samuel Bonton and John H. Madden.

Delaware Auto Storage and Repair Co., Wilmington, Del.; capital, \$25,000; to buy, sell, repair and deal in automobiles and motorcycles. Incorporators, Lewis Rufford, William E. Seaton and Leonard E. Wales.

It is reported that experiments have been made in running automobiles in sandy tracts in Great Britain, with a view to using these machines for passenger service in the Sudan. It is expected that after some alterations are made, the cars will be shipped to Khartoum. If this plan works successfully, desert travel will be robbed of many of its terrors.

BOSTON AGITATED OVER LIVERY AUTOS.

Cab Drivers' Union Induces Police Board to Threaten to Require City Licenses and Fix Hour Rates for Rented Automobiles.

Special Correspondence.

BOSTON, Oct. 24.—It looks now as if the automobile agents of Boston who rent cars by the hour, day or week, would have to bear more licensing and regulations. All automobilists in the State are now required to have certificates of registration, numbers, and operator's licenses from the State Highway Commission. In addition to these, the board of police may require another set of licenses and registration cards and possibly more numbers, for Judge Emmons has decided that automobiles that are rented are public conveyances, and as such should come under the rules and regulations applying to cabs and public hacks.

Another announcement that bothers the automobile livery men more than the prospective licensing by the police board, is that the police board intends to establish a fixed scale of prices to be charged by automobile owners renting their cars. The prevailing price in Boston is \$3 for the first hour and \$2 for each subsequent hour for a machine with a chauffeur. The established hour charge for horse-drawn carriages is as follows: For hacks, coupes, etc., \$1.50 for the first hour or fraction thereof, and fifty cents for each twenty minutes thereafter; for cabs, \$1.00 for the first hour or fraction, and twenty-five cents for each quarter hour thereafter.

The whole subject of the licensing of automobiles by the city, and the establishment of rates has been brought up by the cab drivers' union. When the Sightseeing Auto Company first put the "rubberneck" wagons in service in Boston a delegation from the union appeared at police headquarters and protested against the granting of licenses for these wagons. The cab drivers complained that the sightseeing wagons took away much of their business, and that they were so big that they blocked the streets and frightened the horses. The police board, however, after investigation, found that these vehicles are considered and treated as public conveyances in other cities, and therefore granted the licenses for them.

The cab drivers' union then turned its attention to the automobile agents in the city who are advertising automobiles for rent. They said that automobiles were being rented greatly to the detriment of their business. The police board hadn't heard officially of the renting of automobiles, and when it asked for more particulars, the union men brought to the office a card of an automobile agent, upon which were given the rates for the renting of automobiles.

As a result, the police board has instructed the captains of the different police divisions to canvass their territory and send to the board a list of all persons who are renting automobiles. When these reports are in the board will invite the automobilists to a conference at police headquarters, and the questions of proper automobile rates will be talked over. The board thinks that the present rates charged for automobiles are too high, and it may cause them to be lowered considerably. The board has already decided that automobile owners who rent their cars must take out carriage licenses, the same as owners of horse-drawn public vehicles. Public conveyances are also required to have a city number, and if the same requirement is made in the case

of the automobile, there is likely to be some complication, as the State Highway Commission now requires that a number be shown on almost every available place.

There are only a few local dealers now in the business of renting machines at hour rates, although quite a number are accustomed to rent cars by the day, but they all recognize that there may be a future in the automobile livery business, and therefore they will stand together in opposing onerous police regulation. The agents who let cars saw their attorneys, and the latter, after a scrutiny of the city ordinances, found that the police board has the power to fix rates and require licenses for public vehicles.

The agents have conferred with one another, and when they come before the police board they hope to be able to present their case so that rates will not be made which will make the automobile livery business unprofitable. They claim that their business does not interfere with that of the cab drivers, as it is of an entirely different nature. Said one of them to-day: "We are not competing with the carriage men in any way. If a man wants to go to the station or to the theatre or to make any short trip around town, he does not call for an automobile, but jumps into a cab just as he always did. He takes an automobile when he wants to make a long journey out of town, which he would make otherwise by train. We do not have our cars standing on the street corners soliciting passengers, but we have them ready for pleasure or business trips which nobody would think of making in a horse-drawn vehicle. Another thing which will make it difficult for the police board to fix an equitable scale of rates is the difference in automobiles. If rates are made they will have to be graduated. I cannot let my touring car, accommodating four or five besides the chauffeur, and capable of making a 100-mile run without a stop, at the same rate I can rent a little runabout for a short jaunt into the suburbs. If a man wants a finely equipped, enclosed electric carriage for an evening trip he cannot expect to get it for the same price he would pay for a small steamer."

CO-OPERATIVE GARAGE.

New Yorkers Organize a Sort of Private Service.—Brighton Beach Club.

Special Correspondence.

ALBANY, Oct. 24.—With the Secretary of State has been filed the certificate of incorporation of "The Club Garage of America," an organization or club composed of persons owning or operating self-propelled pleasure vehicles for personal or private use; to secure to members the best care for their machines and service at the places of their residences and other localities, thereby increasing and promoting the pleasure of touring; to furnish automobiles for the use of its members; to enter into contracts and arrangements for such terms as its governors or managers shall approve for the erection, leasing and care of buildings; the operation of shops, the making of repairs upon and furnishing care, attendants and operators for automobiles and motorcars, and the buying and selling of the same on its account and for its members, or for any such purposes. And generally to maintain a club to secure the more efficient care and operation of motor vehicles and promote the sport of automobilism."

The principal office is in New York city. The directors are: Samuel F. Scott, 104 West Ninety-fourth street; George T. Williams, 251 West Eighty-first street; Waldo G. Morse, 10 Wall street; Lewis M.

Machado, 115 Broadway, and Leander Richardson, 109 West Forty-second street, all of New York city.

The Brighton Beach Automobile Club has also been incorporated for the purpose of conducting races, exhibitions and endurance tests of automobiles, and to manufacture, buy, sell or deal in automobiles. The capital stock is \$2,000, divided into 200 shares. The principal office is in the Borough of Brooklyn, and the directors are: William A. Engeman and Alzamora H. Battersby, of 215 Montague street, Brooklyn, and Charles H. Hyde, of 44 Court street, Brooklyn.

WORLD'S FAIR AUTO AWARDS.

Official List as Given Out by Superintendent of Transportation.

Special Correspondence.

ST. LOUIS, Oct. 24.—The automobile awards as given out by Willard Smith, Superintendent of Transportation at the World's Fair, are causing considerable comment, because they are so different from what many of the members of the National Association of Automobile Manufacturers expected. THE AUTOMOBILE representative was shown the list of awards as revised by the Superior Jury and the National Commission. The list is as follows:

Hors Concours (out of competition because the exhibitors were members of the jury); Adolphe Clement, Kellner, Rheims & Auscher, Malicet & Blin.

Grand Prize.—Hayes-Apperson Co., Electric Vehicle Co., Packard Motor Car Co., Geo. N. Pierce Co., Pope Manufacturing Co., Winton Motor Car Co., White Sewing Machine Co., Woods Motor Vehicle Co., Miami Cycle & Manufacturing Co. Among the French makes, Darracq & Co., Dietrich & Co., Michelin & Co., Renault Freres, Panhard & Levassor, Georges Richard, Societe Anonyme d'Electricite & d'Automobiles Mors, Societe Anonyme la Metropole (chainless bicycles). In the German automobile section Benz & Co., Daimler, Continental Caoutchouc & Gutta Percha Co. (pneumatic tires).

Gold Medal.—Knox Automobile Co., Vehicle Equipment Co., National Motor Vehicle Co., Eames Tricycle Co., Badger Brass Manufacturing Co. (automobile lamps), Goodyear Tire Co., Shelby Steel Tube Co. (automobile and vehicle tubes), Veedor Manufacturing Co. (odometers), Hendee Manufacturing Co. (motorcycles), Pope Manufacturing Co. (bicycles), J. H. Williams (forgings for automobiles). In the French section, Jeantaud, Societe Anonyme L'Aster, Postel-Vinay, Vauzelle Morel & Co., Hommond, Monter & Co., Botiaux & Cie.; among French lamp exhibitors, Bleriot, Chas. Billy, Ducellier. In the German section, Mitteldeutsche Gummiwarenfabrik (pneumatic tires).

Silver Medal.—Cadillac, Ford Manufacturing Co., H. H. Franklin, Grout Bros., McCord & Co., Northwestern Military Academy (military automobiles), St. Louis Motor Carriage Co., Sintz Gas Engine Co., Smith & Mabley, E. R. Thomas Motor Co., Olds, Gray & Davis (auto lamps), T. B. Jeffery & Co., Saks & Co. (automobile clothing).

Bronze Medals.—Duryea Power Co., E. C. Redick (auto tires), Graham Co. (auto springs), Motsinger Device Manufacturing Co. (automobile sparker).

An automobile police patrol wagon will be placed in service by the civic authorities in Springfield, Mass., to replace the old horse-drawn wagons. It is thought that a gasoline machine will be selected.



The Racing Board of the American Automobile Association held a meeting on October 24 to consider the clash in dates between the Ormond Beach tournament, January 23 to 28, and the importers' automobile show, January 11 to 24. Owing to the fact that many of the foreign racing cars would be tied up at the exhibition while the racing was in progress on the beach, it was suggested that the date of the Florida carnival be changed. Racing at the beach is governed altogether by the condition of the tide, however, and when it was shown that the dates already fixed are the best available, taking the tide into consideration, it was decided to recommend that the cars leave the exhibition on Saturday, January 21, and be sent to the beach by specially arranged transportation facilities, which would ensure their delivery at Ormond on the following Monday. The promoters of the Florida meet agreed to have the most important events placed in the middle of the week, to give the late arrivals a chance to tune up. Those present at the meeting were W. K. Vanderbilt, Jr., Harlan W. Whipple, A. R. Pardington, James L. Breese, E. T. Birdsall and A. L. Riker.

The A.A.A. Racing Board now has all necessary information in hand regarding the controversy between Barney Oldfield and the Chicago Automobile Club, which organization, as reported in *THE AUTOMOBILE* of October 8, demanded the driver's disqualification on the ground that he raced at Pittsburg while under contract to race at Chicago on the same date. Oldfield has sent his side of the story to the Racing Board, and the matter is now under consideration. A meeting will be held in the near future to come to a final decision.

Barney Oldfield's fiasco at the Brighton Beach track on Saturday, October 22, brought down such a storm of criticism on his head that he begged for an opportunity to redeem himself in the eyes of the public. He now has all the chance he can desire, for a match race has been arranged between Oldfield, Thery, Bernin and Sartori, to take place at the Empire track on Saturday, October 29. The distance will be 10 miles and the race will be run off in two heats and a final. The prize will be a \$500 cup.

The law forbidding automobiles driven by steam or explosive motors to have their motors in operation on ferryboats, which made such a stir in automobiling circles last summer, is to be tested. When W. W. Niles and Jefferson Seligman, of the Automobile Club of America, went to Washington to secure, if possible, a more favorable interpretation of the law from Mr. Metcalf, secretary of the Department of Commerce and Labor, they were informed that nothing could be done except to institute a test case. This is now being done, and the United States Government will appear as plaintiff and the Brooklyn Ferry Company as defendant, with the object of ascertaining definitely just what the law requires of automobiles using the ferries. The papers are in the hands of Assistant United States District Attorney Baldwin, who is preparing the case. Nevada N. Stranahan, Collector

of the Port of New York, will appear for the government. It is not definitely known when the case will come up, but prompt action is expected.

Commissioner McAdoo is turning his attention to reckless drivers, other than automobilists, who make the streets of New York unsafe for all who use them. The cabby who prowls along the wrong side of the road in search of fares, the delivery wagon drivers who block traffic, and the irresponsible boys who scorch around corners and make themselves generally troublesome and dangerous; are all on the commissioner's list, and will come in for a share of his attention.

Last week's reports to the effect that Edward Shotwell had been committed to jail for thirty days in default of the payment of a fine of \$75 for exceeding the speed limit in New York city while driving Levi C. Weir's automobile, is denied by that chauffeur, who states that the fine was paid promptly at the time. According to his account, he had been ordered by his employer to bring the car in from the owner's Long Island home to meet him in town, but that, instead of going direct from the Hunter's Point ferry to meet the owner, Shotwell was on his way to change his clothing when arrested. He considers, therefore, that he was not making unauthorized use of the car at the time, as reported.

An interesting feature of the exhibition of foreign automobiles to be held in Macy's Hall, New York, January 11 to 24, will be the foreign racing machines, which will be exhibited for the first time at an American automobile show. The Clement-Bayard, Fiat, Panhard, and De Dietrich cars that took part in the Vanderbilt Cup race will probably be in this country for the Ormond tournament, or at least most of them, and will be seen at the show—according to present arrangements.

A general meeting of the American Power Boat Association was called for Friday evening, October 28, at the Hotel Astor, New York, to enable the executive committee to submit for approval several amendments to the rules. The amendments, which were unanimously approved by the members of the executive committee, refer to the measurement and power rating of boats.

A challenge for the American Power Boat Association gold cup has been made by Price McKinney, the owner of the *Standard*, through the Thousand Islands Yacht Club. The cup is now in the hands of the Chippewa Bay Club, having been won by *Vingt-et-Un II.*, owned by W. S. Kilmer, who is a member of that organization. The race will take place early next season.

The West Side Y.M.C.A. of New York has issued a prospectus giving in detail the automobile course of instruction to be given during the coming winter. Detailed information can be obtained by addressing the West Side Young Men's Christian Association, 318 West Fifty-seventh Street, New York city.

Rosedale cemetery, Orange, N. J., which has been quite a popular place for automobiling on account of its fine shaded roads, has now been closed against motor vehicles because, it is said, some chauffeurs seemed unable to remember that they were in a cemetery, and some rather harrowing encounters with funeral processions occurred. While those offending were few in number, it was thought best to exclude all automobiles rather than run the risk of further unpleasantness.

The Pope Motor Car Company is building at the Toledo factory a 90-horsepower racing car, which, according to present plans, is to be sent against the world's mile record at the Ormond-Daytona tournament in January. The machine will have a six-cylinder motor, and will be an out-and-out racing machine.

James L. Breese, the well-known New York automobilist, has put forward the suggestion that steps be taken to see if an automobile race track, of about ten miles in circumference, could be laid out on Long Island. Mr. Breese's idea also contemplated the building of a smaller track for short distance contests.

An attractively illustrated little folder has been issued by the management of The Inn, Ormond Beach, Florida, announcing the opening of that hostelry on December 1, and setting forth some of its advantages, especially from the point of view of the automobilist. Particulars may be obtained from Manager Wm. S. Kenney, who will be at The Inn after November 1. Information may also be obtained in New York city at 3 Park Place or 1216 Broadway.

W. D. Grand, the well-known New York horse auctioneer, will hold his second annual automobile auction at the American Horse Exchange, Fiftieth Street and Broadway, New York, on November 10. Mr. Grand states that he has already received several scores of entries and he expects to make these auctions a regular feature.

The Packard Motor Car Company, Detroit, Mich., has secured quarters in Longacre Square, New York, where preparations are being made for the establishment of a very complete garage and salesroom for the Packard product. William H. Hurlbut will manage the business for New York city.

The Olds Motor Works, Detroit, Mich., contemplates opening a branch or placing a direct agency in New York city next spring, and will be open for proposals from responsible persons.

The family of Carl Mensel, the mechanic who lost his life in the Vanderbilt Cup race, has been cared for by Mr. Arents, in whose hands the matter was left, at his own request.



C. A. Duerr, of the Duerr-Ward Company, New York, has purchased F. A. Ward's interest in the concern.

The Acme Motor Car Company, of Reading, Pa., has secured the services of F. E. Moscovics as sales manager.

The Pontiac Body Company, of Pontiac, Mich., has let the contract for a one-story addition, 60 feet wide and 150 feet long, to its automobile body building plant.

The increasing business of the Lobee Pump & Machinery Company, of Buffalo, has made necessary the addition of five new automatic machines to the manufacturing plant.

The Automobile Supply Company, 1,534 Glenarm Street, Denver, Colorado, under the management of E. T. Weiant, is in the market for automobile supplies and accessories.

The Wilmington Garage Co., of Wilmington, Del., which is composed of prominent local owners of automobiles, has purchased a large building at the southwest corner of Eleventh and West streets, and will convert it into a first-class garage.

An Italian agency for American automobiles, parts and sundries has been established in Milan, Italy, by Ferrari & Company, 6 Via Ponte Seveso, who would be glad to hear from American manufacturers who desire to introduce their goods in Italy.

The Lansden Company, of Harrison, N. J., is completing twelve electric trucks for the Adams Express Company in Washington. D. C. Edison batteries will be used, and Thomas A. Edison is said to be personally supervising the installation of his batteries at the Lansden factory.

The Ford Motor Co. of Canada, Ltd., capitalized at \$125,000, has commenced the manufacture of automobiles at Walkerville, Ont. About sixty hands will be employed throughout the winter. Machines for the Canadian trade will be ready early next year.

The Hartford Rubber Works Company will move its Buffalo branch to the store which is soon to be vacated by the Geo. N. Pierce Company, and the Fisk Rubber Company will take the Main Street store formerly occupied by the Buffalo Motor Car Company.

Archibald Ford, of London, recently made a non-stop run of 2,390 miles in a 15-horsepower Darracq, finishing in the London Hippodrome, where he was given a reception by representatives of the Darracq company and presented with the car he had driven.

H. Bernard Hallam & Co. have organized in Seattle, Wash., to handle automobiles. A new building, to be finished in December, is being erected for the business at the corner of Madison avenue and Broadway, Seattle. Pending its completion the office of the concern is at 602 New York Block.

The Poppenberg Automobile Company has taken the Buffalo agency for Rambler automobiles, formerly handled by the D. H. Lewis Company. The Poppenberg Company will add the store at 670 Main Street to its present salesroom and will build a large two-story garage in the rear of the store, extending back to Pearl Street.

Thos. B. Jeffery & Company, of Kenosha, Wis., have established a Rambler branch house in Philadelphia at 242 North Broad street, with W. F. Smith, formerly traveling representative of the company in Pennsylvania, New Jersey and Delaware, in charge.

The Pope Motor Car Co. is preparing for an active campaign in Europe, which it will open by exhibiting at the Paris automobile show in December. H. H. Lyttle, who drove a 24-horsepower Pope-Toledo car in the Vanderbilt Cup race, leaves next month for Paris, where he will act as demonstrator at the automobile show.

The entire output of the Reo cars by the recently organized Reo Car Company, of Lansing, Mich., will be sold through R. A. Rainey and R. M. Owen, of New York, who are well-known in connection with the Franklin and Olds machines. It is expected that the first of the Reo cars will be exhibited at Madison Square Garden show in January next.

The Waltham Mfg. Co. will turn out a four-cylinder touring car with side entrance for the season of 1905, and also a smaller machine at a lower price in addition to its present line. The manufacturing and selling force of this concern has been reorganized. The construction department will be under the superintendence of Leo Melanowski, while C. E. Lozier is sales manager.

The vice-presidency of the Knox Automobile Company, Springfield, Mass., has been resigned by Harry A. Knox, who has held the position since the formation of the company in 1900, and he is no longer connected with the concern, having sold his interest to other stockholders. Mr. Knox will take a long vacation before again entering into active business. James H. Jones has been promoted to the position of head mechanical engineer of the Knox company.

The Western Motor Car Company, Pacific Coast agent for the Thomas Flyer, informs us that in the official races at Los Angeles, California, Thomas Flyers took first and second places in the five-mile open event for cars costing \$2,500 and less, third place in an open event which was won by a 60-horsepower racing machine, and first and second places in the ten-mile race for cars costing \$2,500 and less. The best mile made in this race was run in 1 minute and 14 seconds.

A. L. Dyke, of St. Louis, Mo., who, as already reported, has sold his interest in the A. L. Dyke Auto Supply Company and entered into a business of his own, has incorporated a company called the Original Auto Supply Company, capitalized at \$10,000. A. L. Dyke is president and Carrie J. Dyke secretary and treasurer. Work has been commenced on the company's new quarters at 4427-4431 Olive street, pending the completion of which business will be conducted at 311 Pine street.

C. S. Henshaw, Boston agent for the Thomas car, left that city last Saturday on the continuation of the long journey which is being made with the 1905 four-cylinder 40-horsepower model. He intended first to visit Worcester, where the car was to be demonstrated; Northampton, Mass.; Hartford, Conn.; Pittsfield, Mass., and then drive to Montreal, where he will hand over the car to another driver, who will take it

to several places in Canada. Thence it will go south in time to reach Florida, where the Ormond-Daytona races are run. The first 5,000 miles of the journey of the car were completed October 18, when Mr. Henshaw drove the machine into Boston from New Bedford. He took it in charge in New York, after Mr. Thomas had driven it from Buffalo to Philadelphia and Washington, and drove it through the principal cities of southern New England.

The annual meeting of the Diamond Rubber Company, at Akron, O., resulted in the election of the following officers: President, F. A. Hardy; vice-president and general superintendent, A. H. Marks; secretary, W. B. Miller; treasurer, A. H. Noah. These officers, with O. C. Barber, J. K. Robinson and R. C. Lake of Chicago, constitute the board of directors. Mr. Lake takes the place of W. B. Hardy, now residing in London, and is the only new member of the directorate. The company reports a profitable year's business, and will erect a new office building this fall.

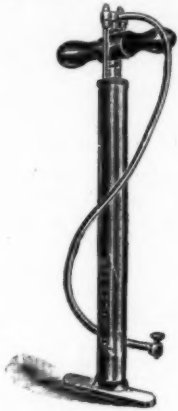
All of the large automobile manufacturing concerns in Buffalo are locating in one part of the business section, and as soon as the George N. Pierce Company occupies its new building, next door to the Teck Theatre building, near Main and Edward streets, the centralization will be complete. The automobile stores have been moving uptown, until now they are nearly all only a stone's throw from one another. The Pierce company's new building is a handsome structure, three stories high, and will have every modern facility known to the automobile world. It will have one of the largest garages in the western part of the state.

The manufacturers of the Jones speedometer call attention to the fact that several recent cases of alleged illegal speeding by automobilists have been decided in favor of the defendants on the strength of the testimony of the speedometer. The latest case was that of Miss Eloise Breese, a sister of the well-known automobilist, James L. Breese. The policeman who preferred the charge against Miss Breese is said to have timed the car with a stop watch; but the court accepted the speed indicated by the speedometer, with which the automobile was equipped, as being more probably correct, and dismissed the case.

The Cook & Stoddard Co., of Washington, D. C., has been incorporated with a capital stock of \$15,000. The officers are: J. M. Stoddard, president; E. R. Alexander, vice-president; R. W. Cook, secretary and treasurer. Mr. Cook was a member of the firm of Cook & Owensney, recently dissolved, and Mr. Alexander was formerly manager of the Baker Motor Vehicle Agency, which has been absorbed by the new firm. In addition to having a strong selling line, including the Winton, Cadillac, Baker electric, White and Stevens-Duryea, the new firm will do an extensive repair and storage business. It has secured the large garage at 1028 Connecticut avenue, formerly occupied by the local branch of the Locomobile Co. of America, and should be an important factor in Washington trade. Mr. Metzger, of the Cadillac Automobile Co., who was in the capital last week, transferred the Cadillac agency to the new firm.

INFORMATION FOR BUYERS.

COMPOUND TIRE PUMP.—The Leather & Brass Mfg. Co., of Auburn, N. Y., makes a tire pump called the Ultra that seems to be just what the automobilist wants. It has two cylinders, one 1 3/4 inches in diameter and the other 3/4 inch in diameter. On the down stroke of the handle the large cylinder compresses air into the small one, which



"ULTRA" COMPOUND PUMP.

is then automatically closed, and on the up stroke further compresses the air. It is claimed that a pressure of 200 pounds can be attained with this pump. A pressure gauge is provided, if desired, being made specially for the pump, but 1 1/2 inches in diameter. The illustration shows the pump closed, when its length is 19 inches.

FRICTION DRIVE RUNABOUT.—A light two-passenger runabout, with a friction transmission, is being built by the Motorcar Company, Jackson, Mich., with a vertical motor having two cylinders of 2 1/2-inch bore and 4-inch stroke, rated at 6-horsepower. The motor is supplied with air cooling or water cooling, at the option of the purchaser. The drive is by side chains to sprockets on the rear hubs. Cylinders and bearings are automatically oiled by means of force feed lubricators having sight glasses on the dashboard. An apron is fitted under the machinery for protection from mud and dust. The gasoline tank contains 6 gallons. The wheel base is 75 inches; tread standard; wheels of wood,

with 28 by 2 1/2-inch clincher tires. Side lever steering is used. The car has a natty hood of the French type, and may, at an advance in price, be supplied with individual front seats and wheel steering.

COVERT RUNABOUT.—The merits of the 6-horsepower Covert runabout as a light touring machine are set forth by the Covert Motor Vehicle Co., Lockport, N. Y., in a little pamphlet dealing with the performance of one of these machines in the St. Louis tour. The machine received a certificate for the run from Buffalo to St. Louis, and the story of the trip is told by telegrams, which are reproduced in the little book. In addition, the chassis of the machine is illustrated diagrammatically, and several highly appreciative letters from users are printed.

LIGHTWEIGHT MOTORS.—What might be termed specializing in specialties is practised by the Trebert Auto & Marine Motor Co., 407 St. Paul St., Rochester, N. Y. This concern makes a specialty of one size and type of motor that is suitable for either marine or automobile use. The motor is rated at 34 horsepower at 800 revolutions per minute, and the weight is said to be not more than ten pounds to the horsepower. It has four vertical cylinders, and is furnished equipped with an internal flywheel clutch. Although this motor is the specialty of the Trebert company, other motors, smaller or larger, can be built on order.

BATTERY CHARGING SETS.—The Holtzer-Cabot Electric Company, Brookline, Mass., is placing on the market a new motor generator, designed especially for charging batteries, which is considered by the makers to be superior in many respects to the dynamotor for this class of work. This motor generator consists of a motor and dynamo mounted on one base and having their armatures mounted on one continuous shaft. The voltage of the secondary current, it is stated, may be regulated by the field rheostat, and if the generator fields are separately excited from the motor circuit the voltage of the generator may be varied from zero to the full potential of the machine, the current output and stability of the voltage being retained throughout the entire range. As this machine is designed to run at a low speed, and the shaft is heavy, no

intermediate bearing is used. The output of the machines ranges from 1-4 to 4 1/4 kilowatt. They may be wound for any direct current circuit, and the secondary may be wound to give any voltage, from 20 to 500. These sets are made in both the open and the enclosed styles, the former being somewhat more easily accessible.

IMPROVED OIL CAN.—An oiler that does away with the necessity for unscrewing the spout for re-filling, and which may be filled without wasting oil and getting things in a mess during the process, is the Rochester automatic oiler, made by the Rochester Automatic Oiler & Supply Co., Rochester, N. Y. There is a piston in the body of the oiler which is packed by two cup leathers. The spout is not attached to the body of the can, but to the piston. When the can is to be filled the piston is forced to the bottom by pressing on the button on the spout,



"ROCHESTER AUTOMATIC" OILER.

which is shown clearly in the accompanying illustration, and the tip of the spout dipped into the oil. By drawing the piston or plunger up from the bottom of the can the oil is sucked in, and when the plunger reaches the limit of its movement the can is full. Oil may be forced out either by depressing the plunger or by the usual spring bottom arrangement. The body of the oiler is of steel, and there are no soldered or brazed joints. Bottoms are solid or spring, as ordered. Spouts of various sizes, straight or bent, may be used on the same can, being interchangeable.

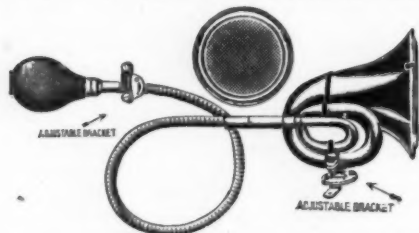
WHEELS AND PARTS.—The Jamesville Mfg. and Wheel Co., of Jamesville, N. Y., has special facilities for turning out large numbers of steel or wire automobile wheels, steering knuckles, screw machine and other parts. The company states that as all these parts are made in its own factory, interesting prices can be made to manufacturers.

CADILLAC VICTORIES.—The Cadillac Automobile Co., of Detroit, points out that in the races at Del Monte, California, on August 27, the Cadillac took first and second places in the race for cars of 10-horsepower and under, second place in the race for cars costing \$1,500 and under, carrying 600 pounds, and first and second places in the race for cars from 10 to 16 horsepower. The last event was run in two heats and a final, Cadillacs winning both heats, and two Cadillacs running first and second in the final.



HOLTZER-CABOT GENERATOR FOR CHARGING BATTERIES.

AUTOMOBILE HORN.—A new style of automobile horn, imported by Charles E. Miller, 97-101 Reade street, New York City, and illustrated herewith, has an extra coil or turn of tubing in the body, which has the effect of making the sound produced more



"LA TUBA" HORN, WITH EXTRA TURN.

musical and resonant, and at the same time the horn takes up but little room. A bracket fitted to the horn has a joint which allows the instrument to be set at any angle, and a somewhat similar bracket is attached to the shank of the bulb where it joins the flexible metallic tubing. This horn is made in two sizes, both having the same features, being made of heavy spun brass with screens over the bells. The reeds are of bronze, and the bulbs, of special rubber, are guaranteed for one year.

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SPECIAL NOTICES

Advertisements inserted under this heading at 50 cents per line: about 7 words make a line. Remittances should accompany copy. Replies forwarded if postage is furnished.

BARGAIN—10-hp. gasoline runabout. Fisher & Son, Bergen, N. Y. 29

BEST automatic gate on earth. Wheel trips it. Catalogue free. Manlove Gate Co., Milton, Ind. 19

CAPITAL WANTED—Incorporating to manufacture motorcycle; thoroughly tried and proven; perfect running motor; lady or gentleman rides with perfect ease and confidence; tremendous field. For particulars address Graff, 75 Hicks St., Brooklyn, N. Y. 29

DOUBLE CYLINDER 16-hp. touring car, 5 persons, \$750; 6-hp. DeDion surrey, \$375; Indian motorcycle, \$135; Columbia motorcycle, \$85; others at low prices; write for list. Tanner Auto Station, New Bedford, Mass. 29

FOR SALE—Foster steam car fitted with model "C" Mason engine and steam air pump; tires and machine in splendid condition; a bargain. Hughes & Demmer, 22 Spring St., Rochester, N. Y. 5

FOR SALE—One new 1904 Oldsmobile, one new Pope Tribune. C. C. Stoltz, Marion, Ohio. 29

WINTON TOURING CAR, 20 hp. Perfect; overhauled; sacrifice. Doyle, 492 Halsey St., Brooklyn. 5

WHITE TOURING CAR, run less than two thousand miles, several extras, new engine. First check for \$1,000.00 takes it; a bargain. Address J. W., care The Automobile, 5

WANTED—A first-class automobile draftsman and designer, experienced in heavy bevel gear drive and sliding gear transmission construction. Address, P. O. Box 251, Springfield, Mass. 29

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